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OHIO NORTHERN UNIVERSITY



JANUARY, 1915

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Business English, Stenography, Typewriting.

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Law.

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Pharmacy.

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Practical Pharmacy, Demonstrator in Laboratory.

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Dean of College of Music.
Voice, Harmony, Oratorio and Opera.

EDWIN LAURENCE ALLEN, A. B.,
Organ.

BERNICE DOROTHY MILLS, B. M.,
Piano.

GAIL WATSON.
Violin.

BERTHA KING,
Rudiments.

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Dean of School of Expression.
Rhetoric, Oratory.

MARY HELEN LEY,
Drawing, Painting.

HAROLD F. COTTERMAN,
Dean of College of Agriculture.
Agriculture.

Domestic Science.

Real Estate Office. Students buy and sell real estate, and all deeds, leases, and mortgages are filled out by the student in charge. The most modern card system and special column books are used. All rents and recording fees are paid to and by this office, just as in the actual real estate business of today.

Stock Exchange. In this office the student buys and sells stocks and bonds of every kind, using the daily quotations published in the newspapers. He charges brokerage for buying and selling, sells above and below par just as quoted and is thoroughly drilled in premium and discount. He buys and sells bonds, declares and pays dividends, makes assessments and does business with three banks.

Commission Office. In this office an extensive commission and shipping business is carried on daily. The most modern stationery, account sales and account purchase duplicating forms, special twelve column journals, check books, filing apparatus, and so on, are used. There is thorough training in Consignments, Shipments and in handling "order" and "straight" Bills of Lading.

Freight Office. Here the details of the shipping business are learned. Goods are shipped prepaid, or C. O. D., and use is made of the modern "order" and "straight" Bills of Lading, freight registers, cash books and other books necessary to carry on the work successfully.

Insurance. A separate and distinct Insurance Office is maintained, in order that no student may confuse its business with the real estate business. After learning them singly there is no trouble in combining the two kinds of business. Policies are filled out, premiums collected, damages adjusted, etcetera. Every policy is carefully recorded in a modern Insurance Policy Register. Use is made of the essential books of account that go with this business.

Wholesale Office. Students sell "actual" merchandise, using daily market quotations, and keep all records in special column Sales Books, Invoice Books, Cash Books and Bill Books. They sell direct or ship to any party, when ordered by mail, prepaying the freight or otherwise, as directed. They have a

complete filing system and use all forms of papers incident to this business. All bills are paid by drafts on the Exchange Bank.

Foreign Banking. A private banking company does an exclusive business in selling Foreign Bills of Exchange on any country on the globe. These bills are issued at a premium or discount and in the denomination and tenure determined by the U. S. Treasury Department. All bills are written in both the foreign and domestic phraseology.

Post Office. The aim is not to teach all the ever changing intricacies of the U. S. Postoffice, but to give instruction in selling Postal Money Orders to those wishing to remit for consignments received, by money order. This way they learn at first hand what to do with fees charged for such orders and also how to receipt and endorse a money order properly as provided by the government. Special registers, et cetera, are used in all the work. The department letters are also delivered through this office.

Banking. Three banks are in constant operation, and doing on the average as much business as a regular small city bank. The installation of a fourth bank at the beginning of the new year is planned, to embody the new ideas that come with the change in the new national banking law. Each bank is conducted in a different manner, from a clerical standpoint, but all do the same amount of business. Modern individual or depositors ledgers, card ledgers, loose leaf ledgers, discount registers, collection registers, certificate and draft registers, cash books, et cetera, are used in all the banks.

Extensive practice is given in discounts, in the handling of certified checks, certificates of deposit, bank drafts, certificates of stock, collections, individual, local and foreign check, protests, cashing of checks and in making remittances to a correspondent daily.

The student acts as cashier, teller, bookkeeper, and has full charge of the entire banking business. Great care is required throughout, especially in filing and indexing, and in closing pass books.

All work done by students is audited daily and the student is informed of his errors, if there be any.

Higher Accounting. This work consist of a number of sets giving advanced instruction in commission, real estate, banking, corporation, manufacturing, railroading and wholesaling. It gives the student specialized accounting along the lines named increasing his efficiency much more than a general training alone can do.

Duplicating devices, loose leaf accounting, voucher accounting, real estate titles, and many other similar subjects are given attention.

The models followed may be applied to all lines of business. The use of the modern check register, and the central office system in the manufacturing business are thoroughly presented.

Salesmanship. Ten years ago there was no such thing as a Science of Salesmanship or a Science of Business. Today the student must be trained in these sciences to meet the new condition.

In the past, business and selling were conducted by guess; today one must know the reason why. To know the reason why is to enormously increase individual efficiency.

In conjunction with salesmanship special attention is given to the science and art of advertising in its application and relation to commerce and modern business methods.

Commercial Geography. A complete exposition of the geographical conditions that affect and determine the commerce of the different nations of the world, and particularly those of our own country.

History of Commerce. A thorough study of the history of commerce from its earliest beginning to the present day. A valuable review of history in a general sense as well.

Commercial Law. Those topics are taken up that every business man should understand: Contracts, negotiable papers, agency, partnership, corporations, liens, interest and usury laws, common carriers, bailments, guaranty and suretyship, stoppage in transit, bankruptcy, mortgages, deeds, real and personal property, etcetera; the aim being not to make lawyers, but to teach the essentials of the law so as to enable one to defend his own rights.

Economics. Two terms. An investigation of the conditions and laws affecting the production, distribution, and con-

sumption of wealth and of the elements, developments, structure and processes of economic life. All commercial students may pursue this subject, yet none but candidates for a degree are required to do so.

Rapid Calculation. Drill in speed and accuracy in figures. The student is required to take special work in this subject and later it is combined with Arithmetic and Bookkeeping. The training is such that a student in carrying out extensions in invoices and statements and computing discounts, is able to do it for the greater part mentally.

Advanced Arithmetic. Classes in Advanced Arithmetic are formed in the Preparatory School in which all commercial students when beginning take a thorough review of that subject. In order to suit the degree of advancement of students, it is generally divided into two sections.

Commercial Arithmetic. Emphasis is placed on billing, percentage and its applications, interest and banking, discounts, insurance, stocks, bonds, adjusting partnership accounts, averaging, et cetera.

The course covers the ground thoroughly from beginning to end and a student mastering it solves all kinds of problems met in the ordinary transaction of business.

Spelling. Regular and systematic drills in written and oral spelling are given in both the bookkeeping and stenographic courses. All students are required to take part in the spelling drills and pass a satisfactory examination.

STENOGRAPHIC DEPARTMENT

Shorthand Reporting

Young men and women cannot engage in a more lucrative business than shorthand reporting. The expert stenographer and the shorthand teacher are in demand, and the emoluments are greater and are received at an earlier stage of study than in any other pursuit. Whenever promotions are made the stenographer, from the very nature of his occupation, having become

familiar with all the principles and methods of the business in which he is engaged, steps into the highest and best paid departments.

Advantages of Ohio Northern

The Stenographic Department has one of the most complete and thoroughly practical courses to be found in any school in the United States.

It seems that many Shorthand Schools are striving to see how short and easy they can make the courses. The ability to write 100 words a minute in shorthand and operate a typewriter is not all that is required. In order to secure the best positions and command the highest wages, the stenographer should have a thorough knowledge of spelling, penmanship, English letter-writing, manifolding, letterpress work, mimeographing, filing letters, indexing, addressing envelopes, folding circulars,—in short a drill in all the work of a general business office. An extra month or two spent in acquiring this practical knowledge is time and money well spent.

Board, room and tuition are so low in Ada, that the complete course here costs less than the "Short Courses" advertised by many city Business Colleges.

The University office as well as the office of the deans of the departments of the school furnish advanced students a fine opportunity for practical office work, both in the dictation of their correspondence and in general office work. The dictation work covers nearly all lines of business, so that graduates are able to perform work in a general business office with more accuracy and dispatch than those who have had experience in one line only.

Systems

The Graham System is taught to all beginners, but the department is prepared to teach any other leading Pitmanic system to commercial teachers who are required to teach any of them where they are employed. The writer of any system who has progressed in his course at some other school far enough to understand the principles thoroughly and who is able to take dictation, will be allowed to enter the dictation classes and write his system.

Typewriting and Mimeographing

All students of the College of Commerce are required to take training in the operation of the typewriter. The Touch system is taught. After the student has learned to operate the machine he is drilled in letterwriting, copying, manifolding, letter press work, forms, punctuation, paragraphing, capitalization, tabulated work, filing letters, mimeographing, and all the general work of a business office.

Typewriting is required to be done in the Typewriting Department. Those taking typewriting elsewhere must present their papers for grades and take examinations, for which a fee of \$4.00 is charged.

All the typewriters consist of the latest models of the Remington and Monarch.

Business English and Letterwriting

In the modern conduct of business, the whole machinery is kept in operation by means of the business letter. The student here is given a thorough course in practical letter writing, including reviews in punctuation, capitalization, correct English, postal information, and general office information. Business English is required in all courses.

Courses of Study

1. Short Courses in Stenography

Diploma: Graduate in Stenography

FIRST QUARTER

Stenography I.
Typewriting and Manifolding
Spelling
Business English and Letter Writing

SECOND QUARTER

Stenography II.
Typewriting and Manifolding
Penmanship
Letter Writing

THIRD QUARTER

Stenography III. (Office Practice)
Typewriting and Mimeographing
Penmanship

2. Long Course in Stenography

Degree: Bachelor of Stenography

FIRST QUARTER

Stenography I.
 Business English (or Commercial Law)
 Economics I.
 Spelling and Rapid Calculation
 Typewriting and Manifolded
 Letter Writing

THIRD QUARTER

Stenography III
 Commercial Arithmetic
 Typewriting and Mimeographing
 Penmanship
 Salesmanship and Advertising

SECOND QUARTER

Stenography II.
 Commercial Law (or Business English)
 Economics II.
 Penmanship
 Typewriting and Manifolded

FOURTH QUARTER

Stenography IV. (Office Practice)
 Typewriting and Mimeographing
 Lettering
 Introductory Bookkeeping and Adding Machine
 Contracts or Negotiable Paper

PENMANSHIP DEPARTMENT

A neat and graceful handwriting, always appreciated, is indispensable to the bookkeeper and correspondent. No other accomplishment save typewriting is of more value to the stenographer. The applicant for employment who writes a good business hand stands a better chance for employment and advancement than the one who writes a poor business hand. A good handwriting therefore, is more than a mere accomplishment—it is a real necessity.

The old idea that good writers are born and not made, that in order to learn to write, one must be especially endowed by nature is no longer recognized. Any student mentally and physically sound, willing to follow instructions and to work can acquire a plain, rapid, legible, business hand while pursuing a business or shorthand course.

The system of teaching employed in the department, develops a plain, rapid and useful style of handwriting; no time is wasted in useless practice or scribbling.

All students in the business and stenographic departments are admitted to the classes in business penmanship without extra charge.

Certificates are granted to all students who meet the requirements, based on speed, legibility, accuracy and neatness.

Special Short Business Course

(Winter Quarter Only)

A special short course in business covering a period of twelve weeks, (one quarter) is offered beginning Nov. 30, 1915, and ending Feb. 25, 1916. This course is designed for those desiring a knowledge of bookkeeping and other commercial subjects, but are unable, on account of farm work and other causes, to pursue the work for a longer period, and only during the winter months.

It covers the fundamental and scientific principles of double entry bookkeeping, the various forms of commercial paper such as notes, drafts, checks, bank drafts, besides the subjects outlined below.

This course is especially valuable to farm boys and girls who desire to keep modern books of account and for those who desire it, special instruction will be given in the application of bookkeeping to the farm and home.

Neatly designed certificates are awarded those who wish them for a small fee of \$1.00

Outline of Course

Bookkeeping, advanced arithmetic, commercial law, spelling and rapid calculation, penmanship.

A certificate from this course will be accepted as the first term's credit for either of the other more extended courses, with the exception of typewriting.

EXPENSES

Special Fees—Bookkeeping and Stenography

A fee of \$3.00 is charged on entering the Office Practice and Banking Classes for use of ledgers, commercial paper and other supplies.

A fee of \$4.00 is charged for use of typewriter twelve weeks, one hour a day; two hours per day, twelve weeks, \$6.00. All who pay the above fees are entitled to free use of the Burroughs Adding Machine. Others are charged \$1.00.

A deposit of \$2.00 is required for use of college currency which will be refunded when currency is returned at close of term's work, less deductions for loss.

The applicant for currency must present his receipts for the above named fees.

Tuition- Business and Stenography

For one quarter, (12 weeks) in advance.....	\$14.00
For two quarters, in advance.....	27.00
For three quarters, in advance.....	40.00
For four quarters, in advance.....	52.00

Tuition—Penmanship

Ornamental penmanship, pen drawing, card writing and show card writing, one hour per day, per quarter\$4.50
General penmanship free to all departments.

Tuition must be paid by Friday of the first week, otherwise one dollar additional will be charged.

All students in the College of Commerce are admitted to the regular classes in the College of Liberal Arts without extra charge.

By paying \$2.00 additional they are admitted to the College of Law.

Rooms and Boarding

Good board in private families, \$1.70 to \$2.75 per week.
Furnished rooms, two in a room, 60 cents to \$1.25 each per week.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

COLLEGE OF PHARMACY

FACULTY

ALBERT EDWIN SMITH, D. D., Ph. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

DAVID CHRISTIAN MOHLER, PHARM. G., PHARM. L.,
Dean.

Pharmacy, Materia Medica, Toxicology.

LENIX CRAIG SLEESMAN, PHARM. G., PHARM. C.,
Director of Chemical Laboratories,
Advanced Chemistry.

RUDOLPH HENRY RAABE, PHARM. G., PHARM. C.,
Practical Pharmacy, Demonstrator in Laboratory.

FRANK LEWIS BERGER, A. B.,
Physics.

HARVEY EVERT HUBER, A. M.,
Microscopy, Physiology, Botany.

HENRY WHITWORTH, A. B.,
Latin.

WILLIAM GROTH, A. B.,
German and French.

EMMET ELIJAH LONG, B. C. S.,
Penmanship.

LEAH ASCHAM, A. B.,
Algebra.

ALFA HOLMES,
Registrar.

LIEUTENANT RAY CORSON HILL, U. S. A.,
Commandant.
Military Science.

ANDREW SCOTT STAUFFER,
Assistant in Physiology.

GUY HORACE DEEMER,
Assistant in Chemistry.

W. FREDERICK THOMAS, C. E.,
Assistant in Metallurgy.

FREDERICK HOWARD NIECE,
Assistant in Surveying.

JOSEPH ADDIS GRAFT,
Assistant in R. R. Surveying.

CORA LARUE,
Librarian.

FLO L. CRONBAUGH,
Stenographer.

AARON ALVIN THOMAS, A. B.,
Financial Secretary.

HIRAM CORNELIUS COOLIDGE,
Custodian of Buildings.

The Aim

The College of Pharmacy of the Ohio Northern University, established in 1887, is endeavoring to prepare men and women to supply the increasing demand for educated and trained pharmacists.

Advantages Offered Here

Since a majority of those seeking a school of pharmacy are looking for one where practical and thorough courses are offered at the least expenditure of time and money, attention is respectfully called to the following pages descriptive of the facilities and work offered in the O. N. U. College of Pharmacy and a comparison with other pharmacy schools challenged. It is believed that nowhere else are more complete courses offered, is more thorough work done, or is the needful expenditure of hard-earned money less than here.

The laboratories are large and an entire outfit is assigned to each student. Fully equipped to make all the various preparations himself, he is thus enabled to receive the practical training desired and required by the employer.

Young women are admitted on an equality with young men.

The Ohio Board of Pharmacy and the Pennsylvania State Pharmaceutical Examining Board grant recognition to the graduates of the O. N. U. College of Pharmacy, who have matriculated since September 1, 1905.

Requirements for Admission

"No school or college of pharmacy shall be recognized as in good standing by the Ohio Board of Pharmacy which does not require of all applicants as a minimum condition of admission, a common school education or the equivalent thereof, which shall include one year in high school of the first grade (Ohio) or any academy, legally constituted, providing a course of study of not less than four years." (Ohio Board of Pharmacy regulation).

This means as a minimum, the applicant must have had a year of instruction in the following: Algebra, English, natural science, history, (United States or general history), and must have reached the age of seventeen years. If he cannot present

certificates of grades in these branches an entrance examination is required before matriculation. This examination, however, is demanded of those only who are candidates for the degree of Pharmaceutical Graduate. Those having had four years practical experience and desiring to prepare for state examinations, need not present certificates as above mentioned.

When to Enter

It is found that a large majority of drug clerks and other young laboring men are not through with their summer's work soon enough to enter as early as the other departments of the University open. The College of Pharmacy, therefore, opens on Tuesday, September 28, 1915, and continues thirty-two weeks, with an intermission at Christmastide. This arrangement has at least two advantages: First, a longer time to work behind the counter; second, the completing of the course just in time to take the state examination in June, when the student is best prepared for it.

Synopsis of Courses.

Junior Year: Practices of Pharmacy, Elementary Chemistry, Botany, Materia Medica, Chemical and Pharmaceutical Laboratory Practice Chemical Equations, Pharmaceutical Arithmetic.

Senior Year: Study of Organic Pharmacal Chemistry, Materia Medica, Physiology, Microscopy, Pharmacal Laboratory, Magistral Pharmacy, Organic Chemistry and Volumetric and Gravimetric Analysis. Prescription Writing and Compounding. Urinary, Water, Food and Soil Analysis.

DESCRIPTION OF COURSES

Practical Pharmacy

The College has two Pharmaceutical and Dispensing Laboratories complete in every detail. The desk arrangement is such as to afford the student every facility for complete and thorough work, and the tables are supplied with an entire outfit of apparatus, including storing closet.

Junior. Each student receives full instruction in the manufacture of waters, spirits, tinctures, liquors, extracts, fluid extracts, abstracts, infusions decoctions, oleates, ointments, cerates, plasters, papers, suppositories, emulsions, collodions, elixirs,

mucilages, official salts, and the more important unofficial preparations. The work includes all the processes of weighing, measuring, ignition calcination, torrefaction, incineration, sublimation, evaporation, distillation, desiccation, granulation, crystallization, precipitation, dialysis, filtration, clarification, decoloration, extraction, percolation, etcetera.

Senior. The principal subjects of this course embrace Prescriptions, Incompatibilities and Drug Assaying. The student is required to do original research work and study the technical processes involved. After learning to read prescriptions, he is trained in filling bona fide physicians' prescriptions from preparations already prepared by him in the laboratory. Practice is also given in filling special prescriptions for the eye and for hypodermic and other uses. Text books, Remington's Arney's, or Casperl's Pharmacy.

Chemistry

The laboratory for practical chemical work is also fully equipped with all the accessories necessary in obtaining a thorough knowledge of chemical analysis and synthesis. There has been added for advanced courses a complete outfit for gold and silver assaying and other metallurgical work. The equipment is excellent in every particular and the work very practical. In this laboratory, open at all hours, the student is required to perform a satisfactory amount of analytical and synthetical work under the personal attention of the Professor of Chemistry and an able assistant.

Junior. Introductory study of Organic Chemistry. The course is graded and the instruction adapted to the proficiency of the student.

Senior. A thorough study of Organic Chemistry, Volumetric and Gravimetric Analysis. Two days each week are spent in laboratory experimentation, and three in class-room exercises and lectures. By combining lectures with thorough laboratory drill, the instructors assure the graduates a comprehensive acquaintance with analytical methods. Textbook: Remsen and Bartley's Chemistry; Muter's Volumetric Analysis and Assaying.

Botany and Materia Medica

Junior. The first part of this work is devoted to the study of Elementary Botany. This is followed by the study of Materia Medica, in which special attention is given to the classification of the vegetable and animal drugs, the specific names, properties, uses, doses, chief constituents, and methods of isolating them; synergists, incompatibles and adulterations.

Senior. Throughout the Senior year there is a study of official and unofficial drugs, their constituents, official preparation, therapeutic effects, toxic properties and antidotes, closing with a discussion of Toxicology and incompatibilities. Text-book: Sayer's, Culbreth's or Wilcox's Materia Medica.

Pharmaceutical Arithmetic

Junior. A training class is organized for special drill in balancing chemical equations and practice in pharmaceutical arithmetic. To this, and also to any class in the College of Liberal Arts, pharmacy students are admitted without extra charge,

Human Physiology

Senior. Twelve weeks of five class periods each are devoted to the course in physiology, which embraces a study of the organs of respiration, digestion, circulation, the nervous system, the assimilation of food, and the physiological and therapeutical effects of drugs upon these organs.

Microscopy

Senior. A practical course in Microscopy is offered to senior students. Not only is explanation given regarding the mechanism of the instrument, and direction in operating and caring for it, but also instruction and practice in the processes of preparing, staining, mounting and preserving specimens. Plants and drugs are studied under the microscope to train the student in detecting and identifying adulterations. Several first-class microscopes of high power are a part of the equipment.

Requirements for Graduation

Each student is required to pass with satisfactory grades an examination at the end of each quarter's work, and the final examination upon the entire course. There will be no deviation from this rule. Absence from final examinations forfeits the degree.

The degree conferred is that of Pharmaceutical Graduate. (Pharm. G.).

Special Courses

Students wishing to pursue a three year course leading to the degree of Pharmaceutical Chemist (Pharm. C.), first complete the course for the degree of Pharm. G., after which additional work is prescribed. Students having graduated from other schools requiring an equal amount of laboratory work are admitted to the second year on presentation of proper credentials. Much of the work is elective, and is divided into courses of eight months each.

To obtain the degree of Pharm. D. (Pharmaceutical Doctor) the candidate must be twenty-one years of age, must hold a standard high school diploma, and must have had four years of practical experience in a store where prescriptions are filled; he must be a graduate of this College of Pharmacy, and must take an additional course, specializing on formulae and assaying of crude drugs. The work required about twenty weeks for its completion.

Nota Bene

At least one thousand hours practical laboratory work are required in the courses.

Superior advantages are offered to registered "Assistants" who wish to review for examination as "Pharmacists."

In the reading room all the leading journals in Pharmacy may be found, and in the library hall all the books needed for reference.

The courses are so arranged as to bring each student into recitations and laboratory work each school day except Saturday, and not twice a week, as in nearly all other schools.

EXPENSES

Matriculation	No fee
Tuition for 32 weeks (including drugs, chemicals and all laboratory fees)	\$75.00
Diploma	6.00

~~§22~~ The tuition and laboratory fee for the entire 32 weeks must be paid in advance.

Students are required to replace all broken or damaged apparatus.

Rooms at 60c to \$1.25 and board at \$1.70 to \$2.75 per week.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rate of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

COLLEGE OF MUSIC FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

ROYAL DELANY HUGHES, A. B.,
Dean.

Voice, Harmony, Counterpoint.

EDWIN LAURENCE ALLEN, A. B.,
Organ.

BERNICE DOROTHY MILLS, B. MUS.,
Piano.

GAIL WATSON,
Violin.

WILLIAM GROTH, A. B.,
German, French, Italian.

ALFA HOLMES,
Registrar.

Aim

The music department of the Ohio Northern University aims at high standards, elevation of taste and conscientious work along musical lines. By virtue of its faculty and equipment it stands ready to give solid, fundamental training in the various branches to all its pupils, and to advance them to a graduation creditable to them and to the University. The school is equally suited to those specializing in music and to those desiring to avail themselves of certain of its advantages, while following some other line of university work.

Equipment

The equipment of the music building is complete. The lower floor is used for teachers' studios, a reception room and a small recital hall. The upper floor is given over entirely to pupils'

practice rooms, thus providing ample room for all the students in the department; these rooms are well lighted, heated and ventilated and equipped with new pianos of good make. The grand pianos on the first floor give pupils the advantage of using the best instruments in public performance.

Brown Auditorium furnishes an excellent place for public recitals and concerts; this building is equipped with a grand piano and a new pipe organ.

Department and Courses

VOICE

Voice Culture. In this department are offered advantages leading to the highest attainment in this line of work.

Voice Placing. Especial attention is given to the proper placing of the voice. This is considered of utmost importance, since by its neglect there almost invariably results a permanent injury to the voice and often to the health.

To accomplish this the pupil is instructed in a proper management of the breath, a perfect control of the registers, and a free and easy emission of the tone. By these means the voice is produced with equal beauty and brilliancy throughout the entire compass.

Preparatory. A thorough knowledge of breathing and breath control; exercises in breathing and tone placing; in agility and relaxation of muscles (pure tone cannot be produced with rigid muscles); Ferdinand Sieber's eight measure studies and the ten studies, Op. 44-49; simple songs, carefully selected to assist the pupil in conquering his difficulties.

Intermediate Collegiate. Exercises in agility, uniting of the tones; the swell, mezzo voce, embellishments; Books I. and II. of Masterpieces of Vocalization, which is a graded series of vocal studies selected from the celebrated works of all the great masters of singing.

Advanced Collegiate. Advanced exercises in agility covering all kinds of scales and chords in both major and minor; mezzo voce, trill, and also exercises for strengthening the voice. Books III. and IV. of Masterpieces of Vocalization.

Throughout the entire course a careful selection of songs from the best American, English, German, French and Italian

writers are used and also arias from the operas and oratorios. While songs in the foreign tongue will be taught in the vernacular, the greatest pains is taken to give the pupil a clear and intelligible enunciation of the English language, and the advice is to sing in our native tongue whenever practicable.

It is advised that voice pupils study German and French.

PIANO

Preparatory. Table and piano work for the development of finger and wrist muscles, major and minor scales, chords and arpeggios. Studies from Lemoine, Op. 37; Duvernoy, Op. 120; Loeschhorn, Op. 52; Heller, Op. 47. Sonatinas and selected pieces by Clementi, Kullak, Kuhlau and others.

Intermediate Collegiate. Octave work by Vogt, Czerny, Mason, Kullak. Studies from Berens, Op. 61; Czerny, Op. 740; Cramer Studies; Heller, Op. 45; Krause Trill Studies; Bertini Etudes; Bach Two—and Three—part Inventions; Sonatas by Hayden, Mozart, Beethoven, Compositions by Mendelssohn, Schubert, Schumann, Chopin, Liszt, Henselt, Moszkowski, Greig, Rubenstein, etcetera.

Advanced Collegiate. Kullak advanced Octave Studies, technical work from Joseffy, Pischna; Tausig Daily Exercises. Selected Studies. Clementi's Gradus and Parnassum; Bach's Well-Tempered Clavicorn; Henselt Studies, Op. 2; Chopin Etudes. Composition from the old masters and best modern composers.

Concertos by Mendelssohn, Mozart, Beethoven, Chopin Hummel, Moscheles, Grieg and others.

ORGAN

Prerequisite. A degree of advancement in piano satisfactory to the music faculty.

First Year. Graded materials for Pipe Organ, by James H. Rogers; Studies from Organ Books I. and II. by George Whiting; Special Pedal Exercises by H. M. Dunham; Hymn Playing.

Second Year. Twenty Preludes and Postludes, Book I. Whiting; Studies in Pedal Phrasing, by Dudley Buck; Selected Pieces, Choir accompaniment

Third Year. Preludes and Fugues, Books I., and II., by J. S. Bach; Selections by standard organ composers.

Fourth Year. Bach's Preludes and Fugues, Books III. and IV. Sonatas by Mendelssohn; Oratorio accompaniments; Concert selections by best composers.

THEORY AND HISTORY

The Course in Theory includes the elements of Acoustics and Tone quality, a description of the Orchestra and its Instruments; Accent, Rhythm and Tempo; Outlines of Motive Transformation and Thematic treatment; Explanation and Analysis of Musical Form. Textbook, "Theory of Music" by Louis C. Elson.

The History Course is a study of the general history of music showing its growth and development. Ancient Music, Early Christian Music; Polyphonic and Monophonic Music; Notation; Instrumental Music in Classic and Romantic form; Opera and Oratorio; Biographies of great composers and a study of their compositions. Textbook, "History of Music" by W. J. Baltzell.

HARMONY

The text used in this course is "Lessons in Harmony" by Heacox and Lehmann, supplemented with collateral texts and reference books. The four quarters of work in this subject required for graduation are as follows:

First Quarter. A thorough knowledge of keys, scales, signatures, intervals and triads, gained by frequent oral and written drill. Use of primary and secondary triads, the dominant seventh and supertonic seventh chords. Playing of cadences at the keyboard.

Second Quarter. The dominant ninth and secondary seventh chords. Writing of original hymn tunes. Modulations to nearly related keys written and played.

Third Quarter. Advanced studies in secondary seventh chords. The augmented sixth, augmented six-five, augmented six-four-three, doubly augmented fourth, and Neapolitan sixth chords.

Fourth Quarter. Modulations to remote keys, written and played. The suspension, retardation, passing tone, embellishment, appoggiatura, anticipation, pedal point and figuration

COUNTERPOINT

The textbook used in Counterpoint is "Simple Counter-

Faculty Organization

DR. A. E. SMITH, Chairman.

R. H. SCHOONOVER, Secretary.

ALFA HOLMES, Registrar.

Committees

Administration: Professors Whitworth, Wright, Smull, Mohler, Taggart, Dr. Smith.

Agriculture: Professors Cotterman, Huber, Wright, Smull.

Athletics: Professors Smull, Slesman, Long, Cotterman, Allen, Miller.

Catalog: Professors Whitworth, Wright, Dr. Smith.

Editing: Professors Wright, Freeman, Groth, Miss Holmes.

Entrance: Professors Whitworth, Freeman, Smull.

Equipment: Professors Thurston, McEachron, Scheid.

Finance: Professor Wright, Miss Holmes, Dr. Smith.

Girls' Welfare: Professor Wright, Mrs. Maglott, Miss Holmes, Miss Ascham, Miss Mills, Miss Ley.

Graduation and Degrees: The Deans and Principal of Preparatory School.

Library: Professors Freeman, Trainum, Fritz, Louthian, Mrs. Maglott.

Literary Societies: Professors Ringer, Ascham, Raabe.

Loan Fund: Professors Whitworth, Wright, Dr. Smith.

Military: Professors Schoonover, Freeman, Trainum, Runser.

Scholarship: Professors Cotterman, Huber, Miller, Whitworth.

Summer School: Professors Davis, Wright, Berger, Freeman.

point" by F. J. Lehmann. The two quarters of work in this subject required for graduation are as follows:

First Quarter. (Prerequisite, Harmony I., II., III., IV.) Simple Counterpoint in two parts, in all species and combinations. Three part counterpoint in first, second and third species.

Second Quarter. Completion of three part Counterpoint; four part Counterpoint; Imitation.

HARMONIC ANALYSIS

The one quarter of work in this subject required for graduation is devoted to a study of parts of the text "Harmonic Analysis" by F. J. Lehmann.

PUBLIC SCHOOL MUSIC

The courses in Public School Methods and Supervision are offered in the Summer Term only. Classes recite daily.

Public School Music I. (First half of term.) A thorough knowledge of music fundamentals and sight-singing. Outlines for work in the first four grades and in the ungraded school.

Public School Music II. (Second half of term) Prerequisite; Public School Music I., or its equivalent. Review of musical essentials and further drill in scales, keys, and sight-singing. Ear training. Outlines for advanced grades. High School Music. Special attention is given to the treatment of the child voice at all ages and to drilling and conducting choruses.

Graduation

To finish any of the courses (Voice, Piano or Organ) with credit usually requires four years of work, the exact time depending upon the talent and industry of the pupil. No pupil is allowed to finish with fewer than two lessons a week during the senior year. A diploma is awarded upon the satisfactory performance of a public recital and the completion of work indicated in the following outline:

Voice. Harmony, 4 quarters; Counterpoint, 2 quarters; Harmonic Analysis, 1 quarter; Musical History, 3 quarters; Theory, 2 quarters; Sight-singing, 2 quarters: enough Piano to play accompaniments.

Piano. Harmony, 4 quarters; Counterpoint, 2 quarters; Harmonic Analysis, 1 quarter; Musical History, 3 quarters; Theory, 2 quarters; 1 year Voice.

Organ. Harmony, 4 quarters; Counterpoint, 2 quarters; Harmonic Analysis, 1 quarter; Musical History, 3 quarters; Theory, 2 quarters; Voice, 1 year; creditable knowledge of Piano.

Resident pupils are expected to belong to the Choral Society and to attend its rehearsals unless excused by the Dean.

Voice pupils should be ready to avail themselves of opportunities for choir work.

No student will be graduated unless he has spent one year in this institution.

Teachers' Course

This course is especially for those pupils who are not gifted as performers but are qualified to teach. To such of these as have completed the required work in theoretical subjects, a Teacher's Certificate is awarded, and the pupil excused from the performance of a graduating recital.

In this course the pupil is required to take at least one pedagogical subject, and the last year of work will be given over largely to normal methods.

Post Graduate Course

Post graduate work in all departments is given to all desiring it. This course is devoted largely to repertoire, and, in voice, to the study of complete roles in oratorio and opera.

Public School Music

Graduation Requirements. No pupil will be graduated from this department unless he has a high school education or its equivalent, can sing in tune, can read ordinary music at sight and has a fair knowledge of Piano.

In addition to the above essentials the following studies are required:

Voice, 2 quarters; Harmony, 2 quarters; Free Composition, 1 quarter; History of Education, I. and II.; Paidology, 1 quarter; Observation I.; Methods I. or Classroom Management; History of Music I. and II.; Grade outline work, Organization and Supervision, 2 quarters.

The course may be completed during summer quarters only; for such studies in the Normal College as are not offered in summer work, suitable substitutions will be made.

Recitals

Pupils' Recitals. Pupils' recitals are held every Tuesday evening during the first three quarters except the first Tuesday in each quarter. At these recitals pupils of all grades of advancement are given the practice and experience of appearing before their fellow-students and friends. A part of each recital consists of a lecture by some member of the music faculty; the subjects of the lectures are chosen with a view to educating the pupil and leading him to higher ideals and standards. Attendance at these recitals is compulsory for all pupils of junior or senior rank.

The pupils' recitals are not private, but the attendance of the public is not urged. On the last Tuesday of each quarter, however, the best work done by students during the quarter is performed and the public is invited.

The pupils of the College of Music are required to furnish a musical program at the University chapel every Friday morning of the school year. This offers to pupils of advanced grade an opportunity for further experience.

Faculty Recitals. At intervals the faculty of the College of Music presents a program of such nature as to further the education and understanding of the students.

Artists' Recitals. A regular course of artists' recitals has become universally recognized as a potent factor in musical education. By means of these recitals the pupils come in frequent contact with great musical personalities and hear the best music well performed. To maintain the course and give all a share in it, each pupil is required to pay a small fee each quarter.

Choral Society

The O. N. U. Choral Society is made up of both university students and townspeople and is open to all who love good music and have an ear for it. The society meets every Monday evening of school during the first three quarters. The fees charged are nominal. The society aims to give two public performances each year.

Choirs

Choir work is of marked value in a musical education. All students who are qualified should take advantage of its benefits.

The large chorus choir in the First Methodist Episcopal Church is under the personal direction of Professor Hughes. Students of a proper degree of advancement will be asked to join this organization.

Other churches of the town have excellent choirs and welcome students.

Rudiments and Sight Singing

A class in rudiments and sight singing is organized each quarter and meets twice a week. It is free to all university students.

Other Organizations

Besides the musical organizations and classes already mentioned, there are orchestras in each of the literary societies, a university orchestra, band, male chorus, male quartets, and so forth.

Tuition and Expenses

*Voice, Piano, Organ, etc., quarter of twelve weeks.....	
two lessons a week.....	\$20.00
*One lesson a week.....	12.00

CLASS LESSONS

Harmony, per quarter.....	\$ 7.50
Counterpoint, per quarter.....	7.50
History of Music, per quarter.....	4.00
Theory of Music, per quarter.....	4.00
Public School Music, per quarter.....	10.00
Piano Rent, one hour a day, per quarter.....	2.50
Clavier Rent, one hour a day, per quarter.....	1.25
Use of Pipe Organ, and Rent of Motor for Pumping same, one hour a day, per quarter.....	12.00
Artists' Recital fee, per quarter.....	.75

*These rates are for lessons by the quarter only. Single lessons are more

Pupils registering within the quarter are charged for one lesson more than is given them.

Private lessons in theoretical subjects given only where pupils are non-residents and unable to attend classes. Tuition is the

same as for private lessons in any subject and the pupil's progress is not judged by the number of quarters he has studied, but by the amount of work done.

Graduation Fee

In the College of Music the graduation fee is \$5.00. Neatly executed diplomas are awarded to those who complete any regular course of study. Those preferring real parchment are charged one dollar extra.

Room and Board

Good board in private families costs \$1.70 to \$2.75.

Furnished rooms, two in a room, 60 cents to \$1.25 a week.

Regulations

1. All tuition payable in advance.
2. Credit will be given for work done elsewhere, and the pupil will be allowed to enter the grade for which he is prepared.
3. No allowance is made for absence from lessons except in case of protracted illness.
4. Pupils who will not practice will not be retained.
5. Applicants must consult the Dean before registering.
6. No student in this institution will be allowed to receive instruction from any teacher outside the school. This rule will be rigidly enforced.
7. All candidates for graduation from any of the prescribed courses will be obliged to pass a satisfactory examination before the College of Music Faculty before entering the Senior year.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

SCHOOL OF EXPRESSION FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

CHARLES ANDREW FRITZ, A. M.,
Dean.
Oratory.

Director of Physical Education.

CHILDE HAROLD FREEMAN, B. S.,
English.
Rhetoric and Literature.

WILLIAM A. TRAINUM, A. M., B. D.,
Psychology.

Legal Ethics, Parliamentary Law.

ALFA HOLMES,
Registrar.

Aim

The aim of this school is to prepare men and women for fuller service in public speaking, whether as teachers, readers, lecturers, preachers or lawyers, and also to meet the need of those who realize the general cultural value of the study of Expression. For this reason expression is taught, not by imitation, but by the mastery of definite laws in such a way as to bring out the individuality of the student.

Curriculum

The course of study in the School of Expression covers two years. In order to obtain a diploma from the school, each candidate for graduation is required to complete about ninety term hours of work. No definite standard can be set, because in this

as in all other arts, the student's advancement depends upon his talent and willingness to work. No student will be granted a diploma until in the judgment of the Dean a satisfactory standard in the art of expression has been reached.

Regular students in the University and all others wishing special work, on the payment of the regular fee, may elect any of the courses in this school for which they are fitted.

General Outline of Courses

I. and II. Principles of Elocution. Study of the vocal organs, breathing, voice training and emphasis. Study of the fundamental elements of expression: Time, quality, force and pitch. Study of philosophy of action and laws of gesture. Reading and recitation of illustrative selections. Text: Fulton and Trueblood's Practical Elocution. This course continues through two quarters. Organized each quarter.

III. Interpretation of Literature. A study of the great masterpieces of literature from the standpoint of vocal interpretation. Lectures on the different forms of literature. Training in sight reading, Bible and hymn reading. Criticism upon each student's rendition of several selections differing in style. This course may be repeated with additional credits. Prerequisites: Courses I. and II. Five hours. Each quarter.

IV. Shakespeare. Analysis and study, from the expressional standpoint, of one of Shakespeare's plays. This course may be repeated as a different play is studied each time. Interpretation of the lines. Rendition of scenes by students, and staging of the play. Whenever it is thought advisable this play can be presented in public by the class. Text: Hudson's Shakespeare. Prerequisite: Courses I. and II. Third quarter.

V. Oratory. Writing and delivery of all kinds of original speeches, with criticism from the instructor. Study of the theory of oratory, kinds of discourse, kinds of audience and construction of speeches, with special emphasis on the writing of the oration. A critical study is made of the lives of several great orators and of their representative speeches. Prerequisite: Course I. Second quarter.

VI. Argumentation and Debate. Close study of the theory of argumentation and debating, with practice in brief

making. This course aids materially in the development of the logical thinking processes of the student. Frequent class debates on leading questions of the day are held under the criticism of the instructor. First quarter.

VII. Extemporaneous Speaking. Lectures on the construction of different kinds of addresses, methods of preparation and forms of delivery. Practice in extempore speaking on current topics. The aim of the course is to teach the student to think and express his thoughts upon his feet. Three hours. Each quarter.

VIII. Junior Private Lessons. In this course the instruction and training is devoted entirely to the individual needs of the student. Each group of six private lessons will be accepted as one term hour credit.

SENIOR

IX. Modern Drama. The study and interpretation of several plays by the great modern dramatists. Training in action, stage business and character impersonation. One of these plays can be staged at the end of the term if it is thought advisable. Second and fourth quarters.

X. Advanced Oratory. A critical study of the history of oratory and of the lives and times of the great orators. Reading and analysis of the great orations of the world. Lectures on the kinds of audiences, oratorical technique and construction of orations. Original addresses are required of each member of the class, with criticism by instructor and members of the class. Third quarter.

XI. Senior Private Lessons. Instruction is devoted entirely to the needs of the student, for only by this method can the student be brought to his highest in the art of expression. In order to complete this course the student must prepare two whole recital programs, one an adaptation of some standard novel and the other made up of miscellaneous selections. The estimate of private lessons for these credits is the same as explained in Course VIII.

XII. Normal Course. A study of methods in teaching oratory, elocution, reading, debate and dramatic art. A close study of the principles of elocution is made. This course is designed primarily for those preparing to teach expression.

Any of the above courses can be given in any quarter when there is sufficient demand.

The following courses, or their equivalents, must be completed by the student before he can receive the diploma of the School of Expression:

English: College Rhetoric I., three hours; College Rhetoric II., three hours; Advanced Literature, five hours; Poetics, three hours; Nineteenth Century Poetry, five hours.

Philosophy: Psychology, five hours. Summer quarter. Required of seniors.

Special Private Pupils

Students not wishing to enter for any of the regular courses may enter for a course of private lessons. In this case the student may make his own choice of selections and designate the number of lessons a week, so far as this does not interfere with his own development. Such students are charged the regular rate for private lessons.

Summer Term

The School of Expression offers a special summer course, beginning the first week in June and continuing eight weeks. The following courses are offered:

1. **The Principles of Reading.** Instruction is given in the proper management of the breath; the best methods of developing a good voice and the theory and practice of the principles of good reading from the printed page.

2. **Interpretation of Literature.** Interpretation of selections by the great writers, from the expression standpoint.

3. **Extemporaneous Speaking.** Same method as in Course VII.

4. **Shakespeare.** Same method as in Course IV.

Classes recite every day. Private lessons at the regular rates can be arranged with the Dean.

Recitals

Abundant opportunity is afforded the student for testing his progress in the art of interpretation. "Northern" has three flourishing literary societies and many opportunities are given

for appearing on their programs. The recitals required of candidates for graduation are explained in the description of Course XI. All private pupils, whether candidates for graduation or not, will be given opportunity to appear in students' recitals, which are given at stated intervals.

Tuition

Tuition for one quarter of twelve weeks including physical work and private lessons, \$25. This tuition entitles each student to 160 class lessons and 12 private lessons.

Special Rates of Tuition

In order to accommodate the students of other departments of the University who may wish to take the work in public speaking in connection with their regular work, the following rates are made: For one subject \$5.00; Physical Training \$5.00; private lessons \$1.00

All tuition is payable at the office of the University. If not paid by Friday of the first week, an additional dollar will be charged. For further information address "The University."

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

OHIO NORTHERN UNIVERSITY

Historical Sketch

In the later "sixties," half a century ago, Henry S. Lehr, a young pedagogue from Eastern Ohio, found his way westward into the village of Ada, then known as Johnstown. He obtained employment as a teacher in the Union schools and subsequently taught a series of terms of "select" school. His spirit, enthusiasm and helpfulness, together with a keen appreciation of the practical in subjects and methods, attracted many "foreign" students and would-be-teachers to his school. The dream of founding a great normal school in which plainness, practicalness and inexpensiveness were to be the main characteristics, became a master passion directing his thought, shaping his plans, and at last taking definite and actual form. In the year 1870-71 the first building, a three-story brick, was erected and on August 14, 1871, the Northwestern Ohio Normal School was formally opened "for the instruction and training of teachers in the science of education the art of teaching and the best methods of governing schools."

In the fall of 1875 the Northwestern Normal School located at Fostoria, Ohio, was consolidated and incorporated with the Northwestern Ohio Normal School at Ada.

From the very start a limited number of special subjects were offered in the courses of instruction, but from time to time, as patronage demanded, department schools were organized as follows: Music, Commercial, Telegraphic, Fine Art, Stenography, Engineering, Military, Law, Pharmacy.

In 1885 the name was changed from Northwestern Ohio Normal School to Ohio Normal University, the plan and management remaining the same, and normal principles and methods marking the administration.

From its inception the school was under private management and control until, in September 1898, the owners sold to the Central Ohio (now the West Ohio) Conference of the Methodist Episcopal Church the real estate and personal property belonging to the University.

Under the new administration, as fast as existing contracts permitted, came a change in the relations of the several depart-

COLLEGE OF AGRICULTURE

FACULTY AND OFFICERS

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

ALFA HOLMES,
Registrar.

HAROLD F. COTTERMAN,
Dean.

Rural Economics, Animal Husbandry, Agronomy.

HAROLD F. WILSON,
Assistant to the Dean.

HARVEY EVERT HUBER, A. M.,
Biology, Geology.

FRANK LEWIS BERGER, A. B., B. S.,
Chemistry.

LENIX CRAIG SLEESMAN, PHARM. G., PHARM. C.,
Organic Chemistry, Quantitative Analysis.

CHILDE HAROLD FREEMAN, B. S.,
Rhetoric and English Literature.

WILLIAM GROTH, A. B.,
Modern Foreign Languages.

MRS. EVA MAGLOTT, A. M., C. E.,
Mathematics.

STRAWDER ARTHUR RINGER, B. C. S.,
Bookkeeping, Banking, Higher Accounting.

ALVA E. ROCKWELL,
Farm Superintendent.

Equipment

The College of Agriculture was established in 1909, and it is gratifying to note the steadily increasing attendance, and also the growth in facilities and resources. Choice animals and new equipment are constantly added, so that this department is now sufficiently equipped to teach in a scientific manner all the branches outlined in the curriculum. A fine farm of fifty acres is at its disposal, the east entrance of which lies just two squares west of the campus.

Four Year Curriculum

This curriculum, leading to the degree Bachelor of Science in Agriculture, and designed to meet the growing demand for trained agriculturists, offers a thorough training in the science of agriculture and modern methods of agricultural practice. The plan of study is intended to give students a broad education and fit them for the business of farming. It presupposes that the student has had a high school training or its equivalent and knows something of general farm practices. Fifteen entrance units are required. A unit is the amount of work done in a "first-class" high school in reciting previously prepared work once a day, five days a week, throughout a year of thirty-six weeks. Its time equivalent is 120 clock-hours. Subjects pursued for a less time are given a proportionate value. A student may enter, however, conditioned in three units, provided the conditions are removed before the senior year. A total of 200 hours is required for graduation.

ADMISSION

Candidates for admission to the course leading to the degree of Bachelor of Science in Agriculture must present

English I., II., III.	3 units	✓
Mathematics I., II.	2½ units	✓
History I. III., (or II.) V., VI.	2 units	
Science I., II., III.	2 units	
	— 9½ units	

and one of the following groups:

A—Latin I., II.	{	2 units	✓
B—German I., II.			
C—French I., II.			
		11½ units	

and in addition, any 3½ units taken from the following list: Zoology, Geology, Astronomy, Chemistry, English History, Economics, Solid Geometry, Plane Trigonometry, Advanced Arithmetic, Latin, Modern Languages. In place of some of the subjects just named, other academic subjects of equivalent value may be presented.

OUTLINE OF FOUR YEAR CURRICULUM

Degree Bachelor Science in Agriculture

First Year

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
Hrs.	Hrs.	Hrs.
Animal Husbandry I...4	Animal Hus. II...5	Animal Hus. III...5
Physics IV...5	Physics V...5	Physics VI...5
College Rhetoric I...4	College Rhetoric II...4	Advanced Literature...5
Biology I...3	Biology II...3	Zoology III...3
Cadet Service	Cadet Service	Cadet Service

Second Year

Chemistry I...5	Chemistry II...5	Chemistry III...5
Botany I...4	Botany II...4	Botany III...4
Mechanical Drawing...4	Geology I...3	Agronomy I...5
Agronomy II...4	Agronomy III...4	Horticulture...4

Third Year

Chemistry Organic...5	Chemistry Organic...5	Chem. Quantitative...5
Animal Husbandry IV...4	Animal Hus. V...4	Dairy...4
Agronomy IV...5	Soil Fertility...4	Bookkeeping...5
Elective...5	Elective...5	Elective...5

Fourth Year

Economics I...5	Economics II...5	Rural Economics...5
Elective...10	Elective...10	Elective...10

Ten or more hours may be selected throughout the year from any department.

Two Year Curriculum

A curriculum prescribed for students desiring a thorough practical working knowledge of modern agricultural science. It includes work of a general educational character followed by practical courses in crop production, animal husbandry, and farm management. A total of 100 hours is required for graduation. Young men intending to make farming their vocation will find in this curriculum a good preparation for a successful career.

OUTLINE OF TWO YEAR CURRICULUM

Diploma: Graduate in Agriculture

First Year

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
Animal Husbandry	Animal Husbandry II.	Animal Husbandry III
Mechanical Drawing I.	Physics I.	Chemistry I.
Agriculture I.	Agriculture II.	General Botany
College Rhetoric I.	College Rhetoric II.	Agronomy I.
Cadet Service	Cadet Service	Cadet Service

Second Year

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
Agronomy II.	Agronomy III.	Horticulture
Chemistry II.	Soil Fertility	Dairy Fundamentals
Agronomy IV.	Commercial Law	Bookkeeping
Animal Husbandry IV.	Animal Husbandry V.	Rural Economics

Special Winter Curriculum

The special winter curriculum in agriculture has been arranged to meet the demand of the average farmer boy who in these days of high priced labor must help with the work late in the fall and early in the spring. This is offered during the winter quarter only, thus enabling young men to come in after the fall work is done and get out in time for spring work. The curriculum will be varied from year to year so that any student wishing to pursue it several consecutive years may acquire a valuable fund of information helpful in his chosen calling.

OUTLINE OF SPECIAL WINTER CURRICULUM

FIRST YEAR	SECOND YEAR	THIRD YEAR
Animal Husbandry I.	Biology II. or Physiology	Animal Husbandry III.
English Composition	Animal Husbandry II.	Animal Husbandry V.
Agriculture I.	Agronomy II.	Soil Fertility
Physics I.	Chemistry I.	Bookkeeping or Commercial Law
	Animal Husbandry IV.	

NOTE: Those interested in this course should write for special winter term circular.

Facilities for Instruction in Animal Husbandry

The University offers excellent advantages to students in animal husbandry. On the university farm there is kept a number of superior animals for class room purposes. The farmers of Ohio are manifesting great interest in the work of the agricultural department by donations of stock as well as money. The stock donations consist of Percheron horses, Holstein Fresian, Guernsey, Jersey and Red Polled cattle, Merino, and Ramboulette sheep, Duroc Jersey, Poland China, Chester White and English Berkshire hogs. Within convenient reach of the University, are breeding stables of imported Percheron, Belgian

and German Coach horses. Studs of Morgan and Standard bred blood are also maintained in Ada. The university library has upon its tables all the important current live stock literature, while the traveling library of the state supplies the institution with numerous volumes upon animal husbandry. Every available bulletin of the experiment stations of the various states and of the United States department of agriculture, including the year book of that department and the works of the Bureau of Animal Industry, may be found on the library shelves.

Description of Courses in Animal Industry

I. Horses—Types, Breeds and Market Classes. This course embraces a detailed study of the various types of horses, special reference to the history of breeds and a brief consideration of market classes. Judging by score card and comparison. 4 hours.

II. Cattle—Types, Breeds and Market Classes. Text-book discussion of types of cattle, history of breeds and market classes. 4 hours.

III. Sheep and Hogs—Types, Breeds and Market Classes. The work is much the same as in courses I. and II. Text-book and discussion of types, history of breeds and market classes with consideration of score card. 4 hours.

IV. Breeding of Farm Animals. A comprehensive course in both theoretical and practical methods of breeding; embracing a study of the science of genetics, the value of pedigrees and the common practices of the most successful farmers.

V. Feeds and Feeding of Animals. This includes a study of the supply, composition and value of feeding stuffs; the principles underlying nutrition; the care of handling of animals, with special reference to the economy of feeds.

Facilities for Instruction in Agronomy

Plans are now being formed to fit the new buildings with all the modern agronomy equipment. The soil laboratory will contain new appliances for studying soil phenomena.

The University farm affords excellent opportunity for the study of farm crops. Samples of corn, wheat, oats and other seeds for grain judging and grading, dried specimens of forage

crops, grasses, and green plants, typical ears of the most important varieties of corn grown in the state, samples of the many varieties of barley, soy beans, cow peas, and other seeds are to be had in abundance.

Every year the University receives donations of farm machinery for farm use. This may be used as object lessons in the study of farm engineering. In addition several local hardware stores offer excellent advantages for the study of farm equipment; gas engines, motors, et cetera, may be examined in the mechanical laboratory of the Engineering College.

Courses in Agronomy

I. Soil Technology. This course is designed to give the student in agriculture an understanding of the fundamental principles of the management of soil; for maximum crop production. It includes a study of the process of soil formation and classification, the physical properties of soil and modification of soil structure by cultural operations. 4 hours.

II. Cereal Crops. Cultural methods, including planting, cultivation, harvesting and marketing, with special reference to seed selection. 4 hours.

III. Forage Crops. A continuation of course II., with a study of the geographical distribution of all the important forage crops of the United States. 3 hours.

IV. Agricultural Engineering. Successful farm management is largely dependent upon a knowledge of engineering facts and principles. This course embraces a study of agricultural surveying drainage, irrigation, farm machinery, farm motors, farm structures, and farm sanitation. 4 hours.

Other Courses

General Botany. A course designed primarily to meet the needs of agricultural students.

Horticulture. A study of pomology including the principles involved in growing, harvesting and marketing fruits with special reference to the control of insects and fungus diseases. The compounding of sprays and a brief consideration of spraying outfits

Soil Fertility. A study of the principles underlying plant growth; soils and soil types, tillage, drainage, soil bacteria, green manuring, rotation of crops, barnyard manure, its composition, preservation, methods of application, commercial fertilizers, composition, kind and time to apply, etcetera. 5 hours.

Dairy Fundamentals. A general course covering the important points of farm dairying, the handling of milk and cheese, the principles of the Babcock tester, the important dairy organizations and latest dairy legislation.

Rural Economics. The most important of all courses, for without management, specialized study is of little profit. This course embraces a history of agriculture, the factors of agricultural production and the guiding principles in the organization of a farm, et cetera. 5 hours.

Rural Sociology. An elective course dealing with rural social problems. All the constructive rural forces are studied in detail. Report, investigation and research.

For further description of courses, see the respective departments in the preceding pages.

EXPENSES

Matriculation

No matriculation, or entrance fee, is required to enter the University. Some schools advertise free tuition, but it will be found that entrance fees with them amount to more than tuition fees here, a fact not to be overlooked by those selecting a school thorough, yet inexpensive.

Tuition Fee

For one quarter, (12 weeks) in advance.....	\$14.00
For two quarters, in advance.....	27.00

All students paying the regular tuition fee are admitted to the general classes in Rudimental music without extra charge.

Laboratory Fees

Fees to cover breakage and cost of chemicals and other materials used in the laboratories are charged each quarter as follows: Chemistry \$5.00; Physics, \$2.50; Biology, Botany and Zoology, each, \$2.50.

Rooms and Boarding

Good board in private families, \$1.70 to \$2.75 per week.
Furnished rooms, two in a room, 60 cents to \$1.25 each per week.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

SCHOOL OF FINE ARTS

FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

MARY HELEN LEY, B. F. A.,
Dean.

Drawing, Painting, Etc.

ALFA HOLMES,
Registrar.

General Remarks

The aim of the school is to give a thorough, systematic training in the fundamental principles of Art.

The Studio and Art Shop

The studio is well equipped with models in all its departments. Students have access to standard art magazines and literature of the day.

In connection with the studio is an Art Shop, with facilities for furnishing the best possible material and supplies for all branches of art work at a minimum price. Easels and other equipment are provided by the school.

A kiln set up in the building affords opportunity for making a practical study of the firing of china. White china is found on sale in the Art Shop.

Courses of Instruction

I. Preparatory Classes. Drawing from simple objects where special attention is given to correct seeing of form and proportion.

II. Modeling of simple objects to give a comprehensive study of light and shade values.

III. Drawing of interiors to give a systematic training in perspective drawing.

IV. Painting Classes. In either oil, water color or pastel, from still life and nature. Out door sketching in season.

V. Decoration of China. In the realistic and conventional.

VI. Stenciling.

VII. Indian Basketry.

VIII. Normal Courses. For public school teachers.

In class instruction the work of each student is carefully supervised. Thoroughness is insisted upon, and the aim is to call out the latent ability to its fullest expression. Promotions depend on the degree of proficiency shown in the work, and this is tested by examinations under the direction of the Dean.

Description of Courses

Drawing. A knowledge of form and how to express it lies at the basis of all fine art and also enters into much of the work of applied science, and hence drawing occupies an important place in the curriculum.

Special attention is given to freehand, lettering, perspective, projection and mechanical drawing. Those studying engineering, physics, and mechanics are required to take a thorough course in drawing.

Sketching. Skill in the art of drawing and sketching is indispensable to success in primary teaching, and also greatly increases the efficiency of the teaching in natural history and physics. Indeed, drawing and sketching, once thought mere accomplishments, are now recognized as attainments of utility to every calling. Drawing occupies so prominent a place in the work of the public schools, that the call for competent teachers is noticeably increasing. The work in drawing embraces pencil, pen and ink, charcoal and black board sketching.

Painting. The course in painting includes landscapes, fruits, and flowers from nature and much time is given to painting from still life where the basic principles are systematically taught.

The mediums employed are oils, water colors, pastels, pen and ink and charcoal.

China decoration in both the naturalistic and conventional is a popular feature of the art work. A course in Indian basketry and all kinds of raffia work is also offered.

Students satisfactorily completing the courses above mentioned are eligible to a certificate, but diplomas are granted only to those who have completed the three years' course.

Students are advanced upon the merit of their own work, and especial attention is given to students whose time is limited.

EXPENSES

Fine Art, 1 branch, per quarter.....	\$12.00
Fine Art, 2 branches, per quarter.....	20.00
Fine Art, 3 branches, per quarter.....	25.00
Fine Art, 1 branch, per half quarter.....	7.00
Fine Art, 2 branches, per half quarter.....	13.00
Fine Art, 3 branches, per half quarter.....	15.00
Fine Art, 1 branch, per week.....	2.00
Freehand, per quarter.....	5.00
Freehand, and 1 branch, per quarter.....	12.00
Normal training, for public school art, per quarter....	6.00

Graduation Fee

In the school of Fine Arts the graduation fee is \$5.00.

mental schools with the main school. These, heretofore semi-independent, were now reorganized under one management and control, and the respective deans placed on salary instead of commission. At the same time instruction in the main school was made departmental, with the head-teacher in each department director thereof.

In 1904-5 the institution was rechartered under the name Ohio Northern University.

Material Equipment

The University Campus lies in a resident portion of the village, a few blocks south of the Pennsylvania Station. Here "Old Glory" may be seen the year round, waving from the summit of a hundred-foot steel staff a welcome to the chance visitor or prospective student.

In the midst of the campus stand three imposing memorial buildings: On the south side, the Dukes Memorial with commodious classrooms, offices and laboratories, devoted to science, mathematics and engineering; in the center, the Lehr Memorial, nearly completed, in which are to be located the executive offices, the Y. M. and Y. W. C. A. rooms, the library with reading and research rooms, the apartments of the College of Law and the College of Commerce, and a magnificent auditorium seating 1600 people; to the north, the Hill Memorial, just finished, devoted to language, history, philosophy and education; in this building are the mechanical and electrical laboratories and the attractive halls of the Franklin and Philomathean literary societies.

In the northeast angle of the campus is located Brown Memorial, soon to be fitted up for a gymnasium, but at present an assembly hall for entertainments of all kinds from sermon-lectures to basket-ball.

Pharmacy Hall, in the northwest angle, especially arranged and equipped for the College of Pharmacy, contains also the spacious assembly room of the Adelphean literary society.

Just outside, southwest of the quadrangle, is Music Hall with its assembly room, offices and private practice rooms cozy and convenient.

Rooms and Boarding

Good board in private families, \$1.70 to \$2.75 a week.

Furnished room, two in a room, 60 cents to \$1.25 each a week.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

DEPARTMENT MILITARY INSTRUCTION FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

FIRST LIEUT. RAY CORSON HILL, U. S. A.,
Commandant.

Under act of Congress, approved April 21st, 1904, an officer of the regular army is detailed at this University.

The arms and equipments, and the artillery, with the necessary appendages, are issued by the Ordnance Department of the United States Army. Swords and belts are furnished to the cadet officers.

Target practice is held with the sub-caliber rifle, caliber 22.

Organization

The Cadet Battalion at the present time consists of the following: One Cadet Major, one First Lieutenant and Cadet Adjutant, one First Lieutenant and Cadet Quartermaster, one First Lieutenant and Cadet Band Leader, and one Cadet Sergeant Major. Each company consists of

1 Captain, 1 1st Lieutenant, 1 2nd Lieutenant, 1 1st Sergeant, 1 Quartermaster Sergeant, 4 Sergeants, 4 Corporals, 27 Privates.

The Band consists 1 1st Lieutenant, 4 Sergeants, 1 Drum Major, 4 Corporals, 22 Privates.

Appointments and Promotions

The cadet officers are elected by the companies, and after due examination, if found proficient, are appointed by the Commandant of the Cadets. The Non-Commissioned officers are appointed by the various company commanders, and after examination, as in the case of officers, appointed. A cadet private of ability and energy may pass, in time, successfully through the several grades to the captaincy of his company.

General Orders No. 165, War Department, dated July 24th, 1907, provides as follows: "All rules and orders relating to the organization and government of all military students; the appointment and change of officers, and all other orders affecting the military department, except those relating to routine duty, shall be made and promulgated by the professor of military science and tactics, after being approved by the chief administrative officer of the institution."

The examination for officers, or for non-commissioned officers, comprises for sergeants and corporals, the school of the soldier; for lieutenants, the school of the company; for captains, the school of the company and battalion.

Captains who fail to maintain their companies in satisfactory condition as to strength and instruction are expected to tender promptly their resignation.

Commissions and Warrants

Commissions and warrants, similar to those issued in the regular army, are issued to the officers and non-commissioned officers after passing the prescribed examinations. The commissions and warrants are supplied at the actual cost, \$1.35 for commission, and 60 cents for warrants. These are certificates of military service, and are valuable to the holder in after life, or in time of war. Commissions and warrants will remain in force while the cadet is a student at this University, or at the pleasure of the commandant.

Military Drill Compulsory

Every able-bodied male student intending to complete any of the University curriculums, or taking work necessitating two years or more of attendance, is required to drill and recite in this department three terms and "go through contest;" the military work counting as a substitute for any elective in his curriculum. Assignments of new students to companies is made by allotment as the names come to the registrar's roll in the office

of the University. In order to secure some credit on the records of the University, the cadet is required to be regular in attendance, to be subject to all military discipline, to drill not less than one hundred and fifty hours, and to win a grade of at least 85 per cent.

Instruction

The cadets are drilled each year in the school of the soldier, company and battalion and in the ceremonies, and in the manual of the saber, besides the regular foot drill. The signal corps is instructed in visual signaling, both with the flag and torch. The band holds the regular band practice at the drill hour every day, and is also exercised in the school of the squad, (infantry). Drill is held every day for one hour, except Saturdays and Sundays. Officers and non-commissioned officers' school is held one hour a week by the Commandant.

The drill (and school) is so timed as not to interfere with the academic duties, and is found to be entertaining, invigorating and healthful—a pleasant relaxation after the close sedentary hours of the students' desk and class room.

Text-Books

The following text-books, furnished by the war department, are designated for the course: Infantry Drill Regulations; Manual of Guard Duty; Field Service Regulations; Small Arms Firing Regulations; Outlines of First Aid of the Wounded; Lectures.

Special attention is given to the preparation of the cadets for the United States Military and Naval Academies, and of candidates for the commissions from the ranks or the Regular Army.

Uniform

The battalion of cadets and the various other organizations belonging to the military department will be uniformed as follows: Khaki breeches, olive-drab flannel shirts, canvas leggings, campaign hat, hat cord and hat ornament. This uniform is similar to that worn by the troops of the Regular Army, and has been found to be the cheapest and most serviceable that can be found. All the parts of the uniform can be worn with civilian dress, so it is not a loss to the cadet after leaving the University. Tan or russet shoes are worn with this uniform, the style to suit the individual wearer. The entire uniform is of superior quality, and can be purchased for about \$8.20, subject of course to the change in the market price.

Prizes.

A special cash prize is awarded in the spring quarter to the cadet presenting the best appearance, and showing the greatest proficiency in drill and discipline.

DEGREES CONFERRED IN 1913

(Names not published in last year's catalog)

IN COURSE

Bachelor of Arts

Welsh, Rhea.....Ada, Ohio

Graduate of Commercial Science

Grabiel, Anna.....Rushsylvania, Ohio

Public School Music

Benidem, Ethyl.....Millersport, Ohio

DEGREES CONFERRED IN 1914

HONORARY

Bickerton, Wilbur E.....	(C. E.).....	Boston, Mass
Colby, Bainbridge.....	(LL. D.).....	New York, N. Y
Gruber, W. W.....	(C. E.).....	Cincinnati, Ohio
Jacobs, Thornwell.....	(LL. D.).....	Atlanta, Ga
Jackson, Geo. B.....	(LL. D.).....	New York, N. Y
Lambert, Ira D.....	(D. D.).....	Cincinnati, Ohio
Loveland, Merrill C.....	(M. E.).....	Chicago, Ill
Magill, Chauncey Byron.....	(D. D.).....	Schenectady, N. Y
Ray, E. E.....	(M. S.).....	Basil, Ohio
Shellito, John Armstrong.....	(LL. D.).....	New York, N. Y
Shonts, Theodore P.....	(LL. D.).....	New York, N. Y
Timbers, H. H.....	(M. E.).....	Chicago, Ill
Van Pelt, Cyrus M.....	(D. D.).....	Cincinnati, Ohio
Willis, Frank B.....	(LL. D.).....	Ada, Ohio

IN COURSE

COLLEGE OF LIBERAL ARTS

Bachelor of Arts

Good, George K.....	Youngstown, O.	Putt, John Kenneth.....	Cincinnati, O.
Montgomery, Pearl Wapakoenta, O.		Rothrock, Harry A.....	Fostoria, O.
Nietz, John Alfred.....	Toledo, O.	Stone, Ralph E.....	Ada, O.

Philosophy

Chandler, Anna Belle.....		Hoffer, Frank W.....	Ada, O.
Upper Sandusky, O.		McKinley, Lorenzo Ellis.....	
Chandler, Ruth Ellen.....			Clarion, Pa.
Upper Sandusky, O.		Mountz, H. W.....	Mechanicsburg, Pa.
Gottschall, Rea M.....	Mendon, O.	Nietz, John Alfred.....	Toledo, O.
Graham, Mary.....	Marysville, O.	Niswander, Walter D.....	Bluffton, O.
Huang, Edith C.....			
	Hong Kong, China		

Science

Barnhart, Edith Valeria.....Butler, Pa.	Portz, Harry G.....Fresno, O.
Domen, Toyonobu.....Hershimia, Japan	Smith, Paul Vergon.....Ada, O.
Graham, Mary.....Marysville, O.	Stoker, Frank W.....Quincy, O.
McKinley, Lorenzo Ellis.....Clarion, Pa.	

English

Beatty, Florence May.....Greer, O.	For'd, Perry T.....Vaughnsville, O.
Buonpane, Blase Augustus.....Youngstown, O.	Gottschall, Rea M.....Mendon, O.
Chandler, Eliza Marie.....Upper Sandusky, O.	Rice, Dale R.....Ada, O.
Chandler, Anna Bell.....Upper Sandusky, O.	Snader, David L.....Baltimore, Md.
Chandler, Ruth Ellen.....Upper Sandusky, O.	Sudlow, John Harvey.....New Plymouth, O.
	Sinkley, Lela Artice.....Ada, O.

NORMAL COLLEGE

Bachelor of Pedagogy

Barnhart, Edith Valeria.....Butler, Pa.	McKinley, Lorenza Ellis.....Clarion, Pa.
Conkle, William Everett.....Kelley's Island	Montgomery, Pearl.....Wapakoneta, O.
Fawcett, John A.....Cannonsburg, Pa.	Nietz, John Alfred.....Toledo, O.
Huang, Edith C.....Hong Kong, China	Niswander, Walter D.....Bluffton, O.
Hinkle, E. G.....Ada, O.	Stoker, Frank W.....Quincy, O.
Manning, James Franklin.....Ada, O.	Welsh, Rhea M.....Ada, O.
	Wilson, Mary E.....Ada, O.

Graduate of Pedagogy

Boyer, Bessie L.....Botkins, O.	Hawes, Esther Marie.....Ada, O.
Curran, Isabel.....Dunkirk, O.	Mitchell, Bernice.....Dunkirk, O.
Chambers, Edna Olive.....Carey, O.	Price, Ione C.....Ada, O.
DeLong, Thomas.....Ada, O.	Price, Lois M.....Ada, O.
Grabiell, Rebecca.....Rushsylvania, O.	Shaw, Ruth Lillian.....Ada, O.
Haupt, Lawrence H.....McCutchensville, O.	Weyer, Dora Pearl.....Ada, O.

COLLEGE OF ENGINEERING

Civil

Allen, Peter F.....Poland, O.	Chavarria, R. Flores.....San Jose, Costa Rica
Blackhurst, John A.....Midland, Mich.	Diehl, Carl W.....Leavittsburg, O.
Bidle, John W.....Apple Creek, O.	DeFrees, Victor Watson.....South Bend, Ind.
Borchers, Rupert F.....Dayton, O.	Fetzer, Howard F.....Ashland, O.
Brown, Clarence O.....Bremen, O.	Gardner, David E.....Portsmouth, O.
Babcock, Earl H.....Hartford, Conn.	Gee, George B.....Lebanon, N. H.
Base, John F.....Peckskill, N. Y.	Graham, Urban A.....Marysville, O.
Backlin, Leroy Axel.....Worcester, Mass.	Hampton, Thos.....Ada, O.
Beckwith, Geo. E.....Niverville, N. Y.	Hollenbeck, Howard H.....Buffalo, N. Y.
Brule, Abundius A.....Central Falls, R. I.	Hyatt, Roger S.....Fredericktown, O.
Cano, Leopoldo A.....Tuxtla, Mex.	Hoskinson, John W.....Shady Side, O.
Clapsaddle, Flay.....E. Liberty, O.	Hadsell, W. V.....Pittsfield, Mass.
Carruthers, Harry J. R.....Arlington, N. J.	Kollefrath, H. A.....Marysville, O.
Campbell, John G. W.....Dartmouth, Canada	Kirkham, Herbert M.....Ada, O.
	Looker, Emerson H.....Botkins, O.
	Locke, N. W.....Bridgeport, Conn.

Lynch, N. H.....Wilkesbarre, Pa.
 Marshall, Chas. C.....Bergholz, O.
 Marshall, James H.....Warren, O.
 Morgan, Arthur J.....Toledo, O.
 Moore, Verno B.....Marengo, O.
 Marshall, Leon G.....Walden, N. Y.
 Noonan, Aloys J.....Galion, O.
 Ortega, E. R.....Mayaguez, P. R.
 Perez de Lara, A.....

Mexico City, Mex.

Spellman, Roger D.....Ada, O.
 Seubert, Harry C.....Camden, N. Y.

Saurer, David E.....Marshallville, O.
 Sanchez, Luis S.....Yubucoa, P. R.
 Snader, David L.....Baltimore, Md.
 Schoonover, H. De Vere.....Butler, Pa.
 Taylor, T. C.....Slippery Rock, Pa.
 Thomas, Willis F.....Youngstown, O.
 Van Ness, R. A.....McLean, Ill.
 Waters, Wm. E.....Wellston, O.
 Wheeler, William H.....

Webster Grove, Mo.

Williams, Robert L.....Elyria, O.
 Zuelzke, Harry.....Fostoria, O.

Electrical

Buezis, C. J.....Spring Valley, Ind.
 Bricker, Ralph W.....Alvordton, O.
 Billheimer, C. R.....Ruffsdale, Pa.
 Bull, George Harold.....Piqua, O.
 Busseire, A.....Rio de Janeiro, Brazil
 Dustman, Arthur G.....Hubbard, O.
 Dobbins, Harry C.....Ada, O.
 Freeman, T. M.....Cokesburg, Pa.
 Hart, Roy H.....Boston, Mass.
 Homrighous, J. H.....Lancaster, O.
 Jury, Austin E.....Greenfield, O.
 Lay, N. W.....Hong Kong, China
 Laker, Claude.....Hoosic Falls, N. Y.

McElroy, Harold Chas.....Ada, O.
 McCarthy, C. C.....Albion, N. Y.
 Mertz, Ralph H.....Ada, O.
 Peck, Leslie A.....Detroit, Mich.
 Restofski, H.....Sag Harbor, N. Y.
 Steiner, Leo E.....Dunkirk, O.
 Stump, Clare A.....Bradner, O.
 Serra, Al.....Rio de Janeiro, Brazil
 Wagner, Loren E.....Luzerne, Pa.
 Warner, Howard P.....Richwood, O.
 Winslow, Frank E.....Wilcox, Pa.
 Yardley, Bernard V.....Yardley, Pa.

Mechanical

Allmon, Elmer F.....Wellsville, O.
 Boesger, George A.....Lakewood, O.
 Bricker, Ralph W.....Alvordton, O.
 Baker, Chas. E.....Montclair, N. J.
 Barnard, Nathan.....New York, City
 Davis, Wm. R.....Parkersburg, Pa.
 Grisbaum, L. D.....Pottsville, Pa.
 Griffith, George F.....Cramer, Pa.

Gamboa, F. C.....San Jose, C. R.
 Restofski, H.....Sag Harbor, N. Y.
 Shirley, John G.....Springfield, Mass.
 Stormer, Robert R.....Oil City, Pa.
 Spreng, Warren M.....Ashland, O.
 Wangenheim, Adolph von.....
 Detroit, Mich.
 Yardley, Bernard V.....Yardley, Pa.

Municipal and Sanitary

Chavarria, R. F.....San Jose, C. R.
 Davidson, G. M.....Wooster, O.
 Marshall, Chas. C.....Bergholz, O.

Mendez, Alfredo.....Mayaguez, P. R.
 Ortega, E. R.....Mayaguez, P. R.

Architectural

Moore, Verna B.....Marengo, O.

COLLEGE OF LAW

Bell, J. Darrell.....Barlow, O.
 Burroughs, Colburn.....Dundee, Mich.
 Dickey, Walter L.....Hillsboro, O.
 Grabien, Frederick O.....Cleveland, O.
 Galbraith, H. B.....Steubenville, O.
 McDaniels, E. J.....Uniontown, Pa.
 Peter Carl R.....Fostoria, O.
 Patterson, Mark.....Geauga Lake, O.
 Powell, Ed. D.....Youngstown, O.

Reed, Ernest V.....Andover, O.
 Riley, Chas. W.....Ellwood City, Pa.
 Smith, Edwin Vergon.....Ada, O.
 Spielman, Chas. A.....Cleveland, O.
 Shulman, Louis J.....Youngstown, O.
 Taft, Millward C.....Vergennes, Vt.
 Van Tilberg, V. L.....Empire, O.
 Webster, E. L.....Middle Bass, O.

COLLEGE OF PHARMACY

Bendoyro, Ramon M.....
 Sagua la Grande, Cuba
 Beck, Arthur A.....Napoleon, O.
 Bennett, R. J.....Claryville, N. Y.

Bennett, H. D.....Claryville, N. Y.
 Christy, Merle T.....Oberlin, O.
 Dent, C. C.....Clarksburg, W. Va.
 DeYoe, Frank S.....Johnstown, N. Y.

Ernsberger, D. D.....	Ada, O.	Overhuls, Jesse M.....	Napoleon, O.
Geringer, Clarence E.....	Wauseon, O.	Probert, William H., Jr.....	Steubenville, O.
Hockaday, Wm. J.....	Greenup, Ky.	Probert, Edward Moore.....	Colorado Springs, Colo.
Hammontree, B. L.....	Wauseon, O.	Ridgeway, Charles W.....	Dayton, O.
Hart, Harry H.....	Minerva, O.	Rutter, C. Harold.....	Barnesville, O.
Kessor, Roscoe W.....	Bellville, O.	Stone, James Hart.....	Vermilion, O.
Kincaid, W. R.....	Cameron, W. Va.	Schmidt, Arthur W.....	Akron, O.
Kress, Elmer L.....	Sardinia, O.	Spangler, James R.....	Shelby, O.
Laughbaum, Gurney.....	Galion, O.	Tyler, Emery E.....	Pueblo, Colo.
McGrew, A. G.....	Canal Fulton, O.	Wyre, Russell E.....	Orrville, O.
Mell, Lloyd X.....	Lima, O.	Williams, Lewis T.....	Rogers, O.
Martin, John F.....	Mt. Vernon, O.	Wagner, L. P.....	Elyria, O.
Messiter, Uriah S.....	Liberty, N. Y.		
Noble, John W.....	Canton, O.		

COLLEGE OF COMMERCE

Business

Bachelor of Commercial Science

Moore, Guy H.....	Lafayette, O.	Tanino, Takeo.....	Okayama, Japan
Roe, Emily Louvila.....	Weston, O.	Woo, Chi Ting.....	Unipo, China

Graduate of Commercial Science

Businger, E. L.....	Las Vegas, N. M.	Paul, Ira Sidney.....	Indiana, Pa.
Hugh, Albert W.....	Dennison, O.	Paul, Ralph W.....	Indiana, Pa.
Johnson, Harry O.....	Donora, Pa.	Ross, Ruth Hortense.....	Ada, O.
McKillop, Ruby Fern.....	Ada, O.	Shadley, Fay M.....	Findlay, O.
Norris, Jessie Marie.....	Ada, O.	Wagstaff, H. O.....	Waynesburg, O.

Stenography

Parlette, Ruth W.....	Ada, O.	Roe, Emily Louvila.....	Weston, O.
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School of Expression

Loomis Bessie E.....	Scotch Ridge, O.	Mitchell, Zella.....	Dunkirk, O.
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COLLEGE OF MUSIC

Voice

Sawyer, Ruby K.....	Beaverdam, O.
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Piano

Graduate in Piano

Ernsberger, Eva Naomi.....	Ada, O.	Smith, Marguerite.....	Kenton, O.
Foor, Mabel O.....	Grover Hill, O.		

Teacher's Course in Piano

Hartwell, Myrl Lena.....	Ada, O.	Templeton, Cora Fay.....	Ada, O.
Rogers, R. G.....	Bridgeport, Conn.		

Public School Music

Byer, Hazel V.....	Quincy, O.	Smith, Marguerite.....	Kenton, O.
Rogers, R. G.....	Bridgeport, Conn.		

COLLEGE OF AGRICULTURE

Chandler, Eliza Marie.....		Parsons, Ward.....	Parsons, W. Va.
Upper Sandusky, O.		Young, George.....	Lorain, O.

REGISTER OF UNDERGRADUATES 1914

COLLEGE OF LIBERAL ARTS

Classical

Barnes, Lucile.....	Hardin, O.	Phillips, Mary.....	Hardin, O.
Broede, Ralph.....	Seneca, O.	Rowe, F. G.....	Hardin, O.
Booth, F. M.....	Columbiana, O.	Rothrock, Ella.....	Hardin, O.
Brooks, L. M.....	Fayette, Pa.	Reeves, Wm.....	Hardin, O.
Granger, Earl C.....	Mercer, O.	Rose, Frank M.....	Trumbull, O.
Gleim, Sophia.....	Scioto, O.	Ridenour, Florence.....	Allen, O.
Lockwood, P. E.....	Union, O.	Shively, Alpha.....	Paulding, O.
Luft, Cora.....	Hardin, O.	Smith, Beatrice.....	Hardin, O.
Manahan, Wm.....	Logan, O.	Wood, Vernon E.....	Orleans, N. Y.
Manahan, H. A.....	Logan, O.	Wiseley, Carrie.....	Hardin, O.
Morrison, Helene.....	Allen, O.	Wintringham, Chas. E.....	Shelby, O.
McAdams, Leonore.....	Hardin, O.	Welsh, Margaret.....	Hardin, O.
Niswander, C. R.....	Hancock, O.	Weaver, L. L.....	Allen, O.
Parker, J. D.....	Hardin, O.	Warren, Dorothy.....	Hardin, O.
Park, Edgar.....	Hardin, O.	Wright, Robert D.....	Hardin, O.
Parkin, Thomas.....	Hardin, O.	Warren, Ethel.....	Hardin, O.

Philosophy

Bartlett, Thomas.....	Davidson, Tenn.	Hankins, Mrs. I. A.....	Fulton, Ind.
Buonpane, Blase.....	Mahoning, O.	Imhoff, G. C.....	Richland, O.
Bowersmith, Mabel.....	Hardin, O.	Montgomery, Josephine.....	Auglaize, O.
Carruthers, W. J. G.....	Hudson, N. J.	Nelson, Lorin.....	Wood, O.
Davis, B. F.....	Hardin, O.	Rose, Lucile J.....	Monongahela, W. Va.
Dobbins, Beth.....	Hardin, O.	Shirk, Paul E.....	Stark, O.
Dailey, Geo.....	Mahoning, O.	Snyder, Barton.....	Hardin, O.
Freeman, Harold.....	Hardin, O.	Weaver, Ralph K.....	Seneca, O.
Hytte, Edward.....	Warren, O.		
Hankins, Oren W.....	Fulton, Ind.		

Science

Arnold, A. F.....	Beaver, Pa.	Leathers, C. E.....	Van Wert, O.
Baxter, Thomas.....	Allegheny, Pa.	Larson, Elmer S.....	Beaver, Pa.
Bailey, H. D.....	Wyoming, N. Y.	McCullough, John R.....	Green, Pa.
Bain, E. E.....	Mexico	Morrison, W. E.....	Noble, O.
Buchele, Irving.....	Hardin, O.	McDowell, Margaret.....	Hardin, O.
Bailey, H. D.....	Defiance, O.	Martin, O. E.....	Darke, O.
Duckworth, B. R.....	Washington, O.	Miller, Harriett.....	Hardin, O.
Doenges, O. C.....	Auglaize, O.	Owens, Ralph.....	Clearfield, Pa.
Dobbins, Raymond.....	Hardin, O.	Pond, J. W.....	Paulding, O.
Driscoll, Arthur.....	Clinton, O.	Pigossi, Dante.....	Allegheny, Pa.
Deemer, G. H.....	Paulding, O.	Rowe, Maurice.....	Henry, O.
Eicher, H. E.....	Fayette, Pa.	Ritchie, T. H.....	Paulding, O.
Frontz, L. M.....	Seneca, O.	Rogers, H. W.....	Licking, O.
Fisher, H. M.....	Westmoreland, Pa.	Simpson, E. B.....	Indiana, Pa.
Guthrie, E. R.....	Coshocton, O.	Sheridian, T. C.....	Lorain, O.
Garwood, Guy.....	Hardin, O.	Stauffer, A. S.....	Allen, O.
Graham, Verne.....	Union, O.	Sankey, Carl H.....	Wood, O.
Hill, Harry.....	Hardin, O.	Staker, D. D.....	Scioto, O.
Harris, W. Lewis.....	Scioto, O.	Stuft, J. W.....	Somerset, Pa.
Harshman, Ralph.....	Hardin, O.	Sleasman, J. W.....	Fayette, Pa.
Haney, Bess.....	Hardin, O.	Schoonover, Merritt.....	Hardin, O.
Judson, V. S.....	Richland, O.	Sheets, Glen D.....	Stark, O.
Johnson, C. D.....	Morgan, O.	Scott, Winfield.....	Hardin, O.
Judson, R. S.....	Richland, O.	Thomas, F. L.....	Wyandot, O.
Johnson, Catha.....	Morgan, O.	Taylor, C. O.....	Champaign, O.
Kusian, G. L.....	Defiance, O.	Tuttle, S. M.....	Wyandot, O.
		Thomas, G. M.....	Cambria, Pa.

Vanorsdall, Harry.....	Clinton, O.	Younger, W. S.....	Mercer, O.
Williams, F. W.....	Darke, O.	Young, B. S., Jr.....	Hardin, O.
Walker, G. C.....	Auglaize, O.	Yeastling, G. A.....	Sandusky, O.
Warner, C. A.....	Pickaway, O.		

ENGLISH

Best, Jane.....	Ohio, W. Va.	Fisher, Runison.....	Morrow, O.
Beard, S. S.....	Paulding, O.	Fast, Edith.....	Paulding, O.
Bell, Clara.....	Licking, O.	Flowers, Vera.....	Hardin, O.
Clapsaddle, F. S.....	Logan, O.	King, Bertha.....	Hardin, O.
Crossett, Alta.....	Gratiot, Mich.	Murray, Thomas.....	New Jersey
Dibble, Ray M.....	Putnam, O.	Nelson, Datha Ruth.....	Jackson, O.
Day, Elizabeth.....	Allen, O.	Nelson, Nina.....	Jackson, O.
Evans, Josephine.....	Allen, O.	Turner, R. W.....	Hardin, O.
Ewing, Helen.....	Hardin, O.		

NORMAL COLLEGE

Adams, Clarence.....	Mercer, O.	Balyeat, Wayne.....	Richland, O.
Armstrong, G. B.....	Wyandot, O.	Brown, Harold H.....	Paulding, O.
Ansley, Wm.....	Logan, O.	Beaver, Anna.....	Union, O.
Ault, Coral L.....	Hardin, O.	Beatty, Florence.....	Knox, O.
Alloway, Lelah.....	Logan, O.	Baughman, Pearl.....	Hardin, O.
Adams, Letitia.....	Eric, O.	Bolinger, Gertrude.....	Marion, O.
Andrews, Mabel.....	Mercer, O.	Barnes, Helen.....	Hardin, O.
Armentrout, Edna.....	Logan, O.	Conn, Clyde.....	Van Wert, O.
Adams, Mary.....	Miami, O.	Crist, Carl F.....	Hardin, O.
Ash, Mary.....	Hardin, O.	Chambers, F. R.....	Van Wert, O.
Bowers, Herman.....	Allen, O.	Combs, Earl.....	Putnam, O.
Barber, Warren.....	Mercer, O.	Coil, Harley H.....	Shelby, O.
Bailey, Clare.....	Auglaize, O.	Crider, Florence.....	Union, O.
Bower, Ernest.....	Logan, O.	Collins, Ruth.....	Logan, O.
Bell, Harry R.....	Huron, O.	Crozier, Golda.....	Hancock, O.
Bollenbacher, Clarence.....	Mercer, O.	Crozier, Joyce.....	Hancock, O.
Bucy, Cliff.....	Holmes, O.	Carr, Myra.....	Allen, O.
Borland, R. L.....	Van Wert, O.	Coates, Nina.....	Auglaize, O.
Baughman, E. A.....	Hancock, O.	Colgin, Laura.....	Knox, O.
Broyles, Lewis A.....	Wood, O.	Carmean, Golda.....	Van Wert, O.
Bowsher, Joe R.....	Allen, O.	Chamberlain, Anna.....	Wood, O.
Borders, G. L.....	Logan, O.	Crissey, Edith.....	Wayne, Ind.
Blue, H. T. O.....	Hardin, O.	Cox, Viola.....	Crawford, O.
Boley, Clyde.....	Mercer, O.	Carruthers, Ella.....	Harrison, O.
Byerly, I. W.....	Allen, O.	Conklin, Hazel.....	Wood, O.
Burns, Florence.....	Wyandot, O.	Crecelius, Esther.....	Eric, O.
Bedrosian, Koharig.....	Turkey-in-Asta	Crim, Ethel.....	Marion, O.
Bowman, Mrs. Minnie.....	Medina, O.	Coppess, Opal.....	Darke, O.
Betz, Hazel.....	Mercer, O.	Coppess, Lena.....	Darke, O.
Beanes, Lillian.....	Mercer, O.	Curry, H. P.....	Perry, O.
Barr, Myrtle.....	Wood, O.	Coombs, Zola.....	Van Wert, O.
Baker, Verda.....	Hardin, O.	Chambers, Ruth.....	Wyandot, O.
Baker, Fairy.....	Hardin, O.	Cooke, Lucile.....	Logan, O.
Brown, Rosa.....	Allen, Ind.	Crafts, Helen.....	Hardin, O.
Bay, Hazel.....	Auglaize, O.	Cooke, Annabelle.....	Logan, O.
Baughman, Lydia.....	Hardin, O.	Cotner, Lola.....	Hardin, O.
Baker, Hazel.....	Marion, O.	Dilley, C. V.....	Wyandot, O.
Brown, Nellie.....	Hancock, O.	Durbini, Judson.....	Knox, O.
Bales, Cora.....	Logan, O.	DeWitt, Gale.....	Hardin, O.
Bowers, Edith.....	Hardin, O.	Gray, Quincy L.....	Allen, O.
Berryhill, Vada.....	Allen, O.	Dailey, Margaret.....	Ottawa, O.
Bennett, Ethel.....	Ross, O.	Dailey, Grace.....	Ottawa, O.
Black, Elizabeth.....	Hardin, O.	Davis, Beryl.....	Logan, O.
Broseke, Mae.....	Hardin, O.	Doster, Velmah.....	Paulding, O.
Broshkotter, Verona.....	Allen, O.	Dick, Laura E.....	Champaign, O.

Diehl, Anna.....	Hocking, O.	Grabill, Alice L.....	Pickaway, O.
Dawson, Jennie.....	Lucas, O.	Gleim, Minnie.....	Scioto, O.
Drennan, Florence.....	Lucas, O.	Graham, Eltha.....	Union, O.
Dickason, Daisy.....	Marion, O.	Gardner, Maude.....	Van Wert, O.
Dixon, Helen.....	Logan, O.	Hoffman, Wm.....	Mercer, O.
Dailey, Jessie.....	Wood, O.	Hord, Dean.....	Marion, O.
Dally, Opal.....	Hardin, O.	Haight, Lee.....	Wood, O.
Davis, Ethel.....	Mercer, O.	Howey, Herbert.....	Union, O.
Davisson, Alma.....	Scioto, O.	Hindall, C. D.....	Hardin, O.
Duffield, Wilma.....	Van Wert, O.	Heitzman, Harold.....	Putnam, O.
Dorn, Ethel.....	Shelby, O.	Hole, Chas. E.....	Paulding, O.
Downing, H. L.....	Allen, O.	Hover, Rodney S.....	Logan, O.
Drew, Uhlma.....	Hardin, O.	Hefner, Geo. G.....	Allen, O.
Davis, Myrl.....	Crawford, O.	Hughes, C. F.....	Allen, O.
Dearth, Ruby.....	Hardin, O.	Hartwell, Myrl.....	Hardin, O.
Dunlap, Irtle.....	Putnam, O.	Huber, Frances.....	Logan, O.
Davis, Mildred G.....	Shelby, O.	Herkenhoff, Mabel.....	Auglaize, O.
Edelman, Clarence.....	Lucas, O.	Hayes, Sylvia.....	Mercer, O.
Early, W. A.....	Marion, O.	Hutchison, Leno.....	Paulding, O.
Ehrman, Aldine.....	Allen, O.	Hunter, Estella.....	Knox, O.
Easley, Ethel.....	Logan, O.	Howald, Louise.....	Marion, O.
Evans, Josephine.....	Allen, O.	Hudson, Vere.....	Paulding, O.
Edminston, Pauline.....	Putnam, O.	Hero, Emma.....	Huron, O.
Ernst, John.....	Shelby, O.	Herring, Alta.....	Shelby, O.
Eddy, Gladys.....	Union, O.	Hickle, Anna Belle.....	Hardin, O.
Fishbaugh, Paul.....	Mercer, O.	Harris, Eula Belle.....	Logan, O.
Fry, J. R.....	Wood, O.	Holtzapple, Nellie.....	Logan, O.
Fite, Clyde.....	Auglaize, O.	Hughes, Fern.....	Logan, O.
Fishbaugh, C. B.....	Mercer, O.	Heiser, Maude.....	Wood, O.
Fox, Fred.....	Auglaize, O.	Heininger, Bertha.....	Wood, O.
Forsythe, Josephine.....	Logan, O.	Haniwalt, Audine.....	Venango, Pa.
Flickinger, Nellie.....	Union, O.	Houchins, Gladys.....	Logan, O.
Foreman, Lela.....	Hardin, O.	Heininger, Hope.....	Marion, O.
Fackler, Georgia.....	Allen, O.	Harmon, Wilbur E.....	Paulding, O.
Fisher, Hazel.....	Hardin, O.	Houser, C. A.....	Allen, O.
Ford, Ethel.....	Van Wert, O.	Hoover, A. D.....	Paulding, O.
Fitzpatrick, Katherine.....	Hardin, O.	Hurst, W. R.....	Richland, O.
Franklin, Marie.....	Putnam, O.	Heaning, Callie.....	Shelby, O.
Fike, Ethel.....	Putnam, O.	Harrod, Jennie.....	Allen, O.
Foucht, Marie.....	Wyandot, O.	Imhoff, Homer.....	Richland, O.
Freeman, Alice.....	Champaign, O.	Imhoff, G. C.....	Richland, O.
Flory, Marian.....	Wood, O.	Impson, Hazel.....	Champaign, O.
Ford, Elda.....	Allen, O.	Inskeep, Ruth.....	Logan, O.
Fulks, Ruth.....	Hardin, O.	Jordan, Ralph.....	Mercer, O.
Graham, Kenneth.....	Crawford, O.	James, Newell D.....	Marion, O.
Graves, Charles.....	Hardin, O.	Jackson, William.....	Logan, O.
Gray, Walter.....	Holmes, O.	Johnson, R. S.....	Crawford, O.
Griffith, Emerson.....	Putnam, O.	Johnson, Warren.....	Muskingum, O.
Graham, Mildred.....	Crawford, O.	Johnson, C. G.....	Morgan, O.
Griffith, Virginia.....	Highland, O.	Jahrans, Clara.....	Erie, O.
Gossard, Daisy.....	Hardin, O.	Jordon, Esther G.....	Champaign, O.
Glenn, Clare.....	Pike, O.	Jones, Edith A.....	Allen, O.
Graham, Clea.....	Auglaize, O.	Jamison, Laura.....	Hardin, O.
Gault, Dessie.....	Paulding, O.	Kruse, Elmer F.....	Auglaize, O.
Games, Viola.....	Auglaize, O.	Katterheinrich, C.....	Auglaize, O.
Gish, Ethel.....	Shelby, O.	Kimble, Avery.....	Hardin, O.
Gottschalk, Louise.....	Fulton, O.	Kitter, Clare.....	Henry, O.
Gottschalk, Hattie.....	Fulton, O.	Kinney, H. C.....	Pike, O.
Graf, Julia.....	Putnam, O.	King, L. F.....	Hardin, O.
Guider, Emma.....	Hardin, O.	Kahler, Alfred.....	Hardin, O.
Gleason, Eva.....	Delaware, O.	Klingler, Gaynelle.....	Allen, O.
Gottschall, Eva.....	Mendon, O.	Kelley, Grace.....	Mercer, O.
Goetter, Mrs. S. E.....	Richland, O.	Klopfenstein, Rosa.....	Shelby, O.

While all the buildings contain attractive, well-arranged rooms, lighted and heated from the University's central steam heating and electrical lighting plant, the Lehr and Hill buildings, especially, are thoroughly modern in their appointments and sanitary equipment, and are fire-proof.

The Chemical and Physical Laboratories are large, well lighted and equipped with natural gas and the latest conveniences. In the general chemical laboratory are one hundred and twelve lockers with first-class outfits including all apparatus necessary for thorough individual work. The physical laboratory has ample accommodation for more than one hundred and fifty students, with abundant apparatus for individual experimentation in preparatory physics. Steps are already taken to greatly increase the equipment for laboratory work in college physics.

The Biological Laboratories, located on the second floor of Dukes Memorial, are well lighted and equipped with water, gas and electricity. The department makes use of a lantern to illustrate lectures and other phases of the work. In the laboratories is found an ample supply of reagents, stains and glassware, also oil immersion lens, dissecting microscopes, camera lucida, micrometer eye-pieces, a large rotary microtome, hand microtome, paraffine bath, microscopic slides, models, charts and preserved materials for study—enough material and apparatus to do modern work in the courses offered.

The Pharmaceutical and Dispensing Laboratories, occupying the entire basement of Pharmacy Hall, are supplied with modern apparatus and desk arrangement; the equipment affording every facility for thorough, individual work in practical chemistry and the various pharmaceutical preparations. The equipment includes a complete outfit for gold and silver assaying and other metallurgical work. In the "specimen room" is an interesting exhibit of all the crude drugs of *materia medica*, a complete line of U. S. P. chemicals, a fine case of salts and alkaloids and another of biological specimens, such as serums, antitoxins, and the like.

The Museum contains numerous specimens and collections for illustrating geology and the biological sciences. In the geological alcove are found all the common minerals and ores, many

Kline, Carrie.....	Erie, O.	McPheron, Lena.....	Allen, O.
Kempfer, Luella.....	Shelby, O.	Miller, Harriett.....	Hardin, O.
King, Marco.....	Hancock, O.	Minshall, Martha.....	Hardin, O.
Kelley, Anna.....	Hardin, O.	Mahan, Leota.....	Hardin, O.
Kushland, Blanche.....	Paulding, O.	Miller, Mabel.....	Ottawa, O.
Kochenderfer, Grace.....	Ashtabula, O.	Mapes, Mildred.....	Morgan, O.
Kilgour, Irene.....	Clarion, Pa.	Miksel, Margery.....	Putnam, O.
Kunzie, Elsie.....	Erie, O.	Nelson, Loren.....	Wood, O.
Kusian, Gilbert.....	Defiance, O.	Nelson, James.....	Mercer, O.
Karns, Augustus.....	Mercer, O.	Neiswander, E. M.....	Hancock, O.
Koehler, R. G.....	Wyandot, O.	Neiswander, Byron.....	Hancock, O.
Kline, Joyce.....	Allen, O.	O'Dell, Emma Dell.....	Hardin, O.
Kelley, Kathryn.....	Hardin, O.	Parcell, Elmer.....	Hardin, O.
Klingler, Minnie.....	Hardin, O.	Pratte, Edwin.....	Logan, O.
Loveridge, A. L.....	Allen, O.	Pifer, LeRoy.....	Mercer, O.
Lacy, Henry N.....	Mercer, O.	Piper, Orial.....	Mercer, O.
Lacy, Roy E.....	Mercer, O.	Parlette, Virgil.....	Auglaize, O.
Lewis, Austin.....	Union, O.	Page, Leo C.....	Wood, O.
Lowry, Marguerite.....	Wyandot, O.	Pond, A. M.....	Paulding, O.
Lapp, Salome.....	Logan, O.	Pardington, Perry.....	Shelby, O.
Loop, Zada.....	Paulding, O.	Patterson, Mabel C.....	Logan, O.
Laufensweiler, Olive.....	Auglaize, O.	Patterson, Edna.....	Auglaize, O.
Ludwig, Nora.....	Shelby, O.	Pratte, Effie.....	Logan, O.
Ludwig, Margie.....	Shelby, O.	Parker, Marjorie.....	Knox, O.
Lutz, Hazel Fern.....	Wyandot, O.	Piper, Jessie.....	Mercer, O.
Linder, Fae.....	Van Wert, O.	Parlette, Lillie.....	Auglaize, O.
Livingston, Hazel.....	Wyandot, O.	Parlette, Annetta.....	Auglaize, O.
Lindawood, Jelina.....	Delaware, O.	Prentice, Grace.....	Paulding, O.
Ley, Leona.....	Van Wert, O.	Potter, Nellie.....	Allen, O.
Longworth, Helen.....	Hardin, O.	Pugh, Arthur J.....	Logan, O.
Leatherman, Elsie.....	Wood, O.	Prugh, Eva M.....	Madison, O.
Leeka, Caryl.....	Marion, O.	Powell, Dovie.....	Marion, O.
Lanles, Clayton.....	Union, O.	Parr, Eunice.....	Hardin, O.
Lucas, Grace.....	Ashtabula, O.	Pool, Hazel E.....	Wyandot, O.
Minter, Ronald E.....	Hardin, O.	Price, Hazel.....	Mercer, O.
McClure, Ray.....	Van Wert, O.	Quackenbos, Rachel.....	Putnam, O.
Main, Niram.....	Hardin, O.	Quaintance, Hannah.....	Wyandot, O.
Mueller, Alberto.....	Van Wert, O.	Rusher, Walter.....	Hardin, O.
Mintern, Walter.....	Geauga, O.	Reese, Herman B.....	Washington, Pa.
Moore, Ross.....	Shelby, O.	Rowand, Carl.....	Clinton, O.
Mason, Ernest D.....	Marion, O.	Reichert, Alois H.....	Mercer, O.
Mayer, Howard E.....	Allen, O.	Richards, Catherine.....	Carroll, O.
McLaughlin, H. A.....	Fairfield, O.	Reese, Clyde A.....	Wood, O.
McCoy, Emerson.....	Van Wert, O.	Ross, Mabel.....	Boone, Ind.
McClain, Irene.....	Wyandot, O.	Rudy, Mildred.....	Miami, O.
McKee, Bertha.....	Allen, O.	Robinson, Oleta.....	Logan, O.
Matson, A. Lloyd.....	Hopwood, Pa.	Rash, Virgie.....	Auglaize, O.
Metz, Ethel.....	Greene, O.	Rabe, Myrtle.....	Mercer, O.
Mollenkopf, Milton.....	Crawford, O.	Rothrock, Fern.....	Seneca, O.
McClain, Blanche.....	Richland, O.	Riebe, Clara.....	Auglaize, O.
McKinley, Donovan.....	Allen, O.	Rinehart, Martha.....	Auglaize, O.
Mellick, Lillie.....	Richland, O.	Reese, Sara.....	Allegheny, Pa.
McCreedy, Berlyn.....	Richland, O.	Reilly, Emmeline.....	Allen, O.
Miller, Florence E.....	Marion, O.	Rice, Dale R.....	Hardin, O.
McFarland, Harley.....	Morrow, O.	Ream, Artie.....	Shelby, O.
Murphy, Jennie.....	Union, O.	Roof, Wilma.....	Carroll, O.
McKill, Bessie.....	Hardin, O.	Richards, Catherine.....	Carroll, O.
McPheron, Gayle.....	Auglaize, O.	Smith, Homer A.....	Van Wert, O.
Moore, Sylvia.....	Hardin, O.	Schmidt, Albert.....	Van Wert, O.
McKnight, Cecil A.....	Delaware, O.	Snow, Forest L.....	Shelby, O.
McClelland, Hannah.....	Hancock, O.	Slack, S. A.....	Galion, O.
McCreary, Nellie.....	Delaware, O.	Stuckey, Nolen.....	Van Wert, O.
Miller, Clara.....	Logan, O.	Stickell, Chas. B.....	Union, O.

Stockstill, Lotis.....	Shelby, O.	Tipton, L. J.....	Monroe, O.
Stover, S. A.....	Darke, O.	Thompson, Luther.....	Scioto, O.
Sankey, Carl H.....	Wood, O.	Towe, Florice.....	Paulding, O.
Shank, Mark.....	Seneca, O.	Turner, Mrs. Mabel.....	Greene, O.
Schertzer, B. L.....	Hardin, O.	Taylor, Mamelvia.....	Paulding, O.
Sprang, Paul E.....	Hardin, O.	Tough, Ethel.....	Hardin, O.
Stahler, Ruth.....	Shelby, O.	Tuohy, Nellie.....	Paulding, O.
Shuster, Julia.....	Hardin, O.	Thomas, Quartense.....	Allen, O.
Shuster, Kathryn.....	Hardin, O.	Tudor, Mary.....	Allen, O.
Schlup, Emma.....	Wyandot, O.	Thomas, Vada.....	Allen, O.
Shinnabarker, Edith.....	Knox, O.	Temple, Alice.....	Hardin, O.
Swartz, Cleo.....	Wyandot, O.	Tabor, Lucy.....	Knox, O.
Schroeter, Genevieve.....	Mercer, O.	Vermilion, John.....	Wood, O.
Steinman, Cleo.....	Hancock, O.	Vesper, Carl.....	Mercer, O.
Smith, Florence H.....	Hardin, O.	Veach, Susanna.....	Van Wert, O.
Skidaker, Hazel E.....	Shelby, O.	*Voke, George.....	Paulding, O.
Streitenberger, Opal.....	Lucas, O.	Voltz, J. H.....	Coshocton, O.
Stewart, Fara.....	Van Wert, O.	Vent, Ruth.....	Wyandot, O.
Stewart, Daisy.....	Van Wert, O.	Winegardner, Arthur.....	Hardin, O.
Schaefer, Glenwyn.....	Erie, O.	Williamson, Clyde E.....	Coshocton, O.
Stephens, Winnie.....	Shelby, O.	Wallace, A. M.....	Logan, O.
Snow, Delma A.....	Shelby, O.	Watkins, Geo. W.....	Shelby, O.
Shaw, Clara C.....	Logan, O.	Watt, Winfield.....	Logan, O.
Stoll, Della.....	Wyandot, O.	Weidinger, Mrs. K.....	Champaign, O.
Sweetland, Mary.....	Logan, O.	Welty, Adelina.....	Putnam, O.
Stine, Augusta.....	Sandusky, O.	Welty, Marie.....	Van Wert, O.
Shook, Donna.....	Hardin, O.	Watts, Joy.....	Pike, O.
Sprain, Goldia.....	Van Wert, O.	Wooly, Matilda.....	Hardin, O.
Stine, Oliva.....	Richland, O.	Wentz, Esther.....	Hardin, O.
Swinehart, Vivian.....	Wyandot, O.	Walker, Frances.....	Harrison, O.
Swinehart, Mattie.....	Wyandot, O.	Wren, Clara B.....	Hardin, O.
Seifert, Marie.....	Wyandot, O.	Wofley, Mary.....	Hancock, O.
Schardine, Ruth.....	Miami, O.	Wilson, Nellie.....	Hardin, O.
Stacy, Bernice.....	Wood, O.	Worthington, Edith.....	Hardin, O.
Smith, Dillie.....	Venango, Pa.	Wiseley, Zella.....	Hardin, O.
Scoles, Dot.....	Allen, O.	Wolfrom, Maude.....	Hardin, O.
Snyder, Inez.....	Wyandot, O.	Wobler, Minnie J.....	Richland, O.
Steinmetz, Stella.....	Hardin, O.	Wherley, Jesse S.....	Tuscarawas, O.
Steenen, Flora.....	Van Wert, O.	Walker, Leo A.....	Auglaize, O.
Smith, Lucinda.....	Erie, O.	Wooley, Nettie.....	Hardin, O.
Shepherd, A. C.....	Belmont, O.	Wilson, Jessie.....	Hardin, O.
Shiveley, Alpha.....	Paulding, O.	Weaver, Helen.....	Butler, O.
Swalley, Homer I.....	Crawford, O.	Young, Nelle.....	Union, O.
Sloan, Elmer.....	Hardin, O.	Yates, Mrs. Dora.....	Hardin, O.
Stabler, Mary Belle.....	Logan, O.	Yeastig, Galen.....	Sandusky, O.
Swartz, Hazel.....	Wayne, O.	Zedeker, Hazel.....	Shelby, O.
Studer, Clara.....	Lucas, O.	Zeigler, Clara.....	Paulding, O.
Stuckey, Lorena.....	Mercer, O.	Zulch, Pearl.....	Van Wert, O.
Shinaberry, Ruth.....	Mercer, O.	Zitt, Kathleen.....	Hardin, O.
Stout, Alice.....	Hardin, O.		
Schrock, Carrie.....	Fayette, O.		
Stone, Hazel B.....	Crawford, O.		

*Deceased.

PREPARATORY

Alexander, Glen H.....	Logan, O.	Baldwin, Orville.....	Auglaize, O.
Augsburger, S. W.....	Holmes, O.	Blythe, S. R.....	Washington, Pa.
Adams, Earl.....	Wood, O.	Belt, Dean B.....	Perry, O.
Albietz, Ella.....	Cuyahoga, O.	Byrne, Robt. E.....	Butler, Pa.
Altoonlan, M. M.....	Turkey-in-Asia.	Ballmer, J. E.....	Allegheny, Pa.
Bedell, Wm. B.....	Rockland, N. Y.	Byrne, Paul S.....	Butler, Pa.
Beavers, Wm.....	Adams, Ind.	Barger, E. S.....	Gallia, O.
Barnett, Norman.....	Clarion, Pa.	Burns, R. M.....	Indiana, Pa.
Borges, Norman.....	Cuyahoga, O.	Bane, Robt. G.....	Wayne, Mich.

Bailey, E. L.	Auglaize, O.	Hall, B. R.	Muskingum, O.
Biggers, Wm. C.	Trumbull, O.	Hixenbaugh, C.	Wetzel, W. Va.
Bell, Clara	Licking, O.	Hunter, A. C.	Fayette, Pa.
Brace, Geo. R.	Lucas, O.	Hurliss, Laurel	Van Wert, O.
Betzel, Rosa	Mercer, O.	Harrison, John K.	Mahoning, O.
Buchter, N.	New Haven, Conn.	Hetrick, Gordon	Hardin, O.
Berryhill, Vada	Allen, O.	Haney, Belle	Marion, O.
Cotner, Walter W.	Allen, O.	Imbody, W. H.	Marion, O.
Cope, Lloyd	Jefferson, O.	Johansen, O. E.	Fairfield, Conn.
Cafferty, Josiah B.	Warren, O.	Johnson, Warren	Muskingum, O.
Cole, Allan	Hardin, O.	Jefferies, Edgar	Fayette, Pa.
Crockett, Fred W.	Allen, Ind.	Johnson, H. W.	Morgan, O.
Cleveland, John	Marion, O.	Jordan, W. A.	Hardin, O.
Collier, James	Lawrence, O.	Jones, Hazel	Richland, O.
Crossett, Alta	Gratiot, Mich.	King, Lester	Hardin, O.
Cox, LaVonne	Hardin, O.	Keiser, Arthur	Shelby, O.
Clifford, Elmer E.	Lorain, O.	Kenyon, Theo. E.	Bradford, Pa.
Copeland, John A.	Bergen, N. J.	Klingler, Hiram	Hardin, O.
Cramer, Chas. E.	Hamilton, O.	Kaucher, Elsie	Hardin, O.
Cronenwett, Walter	Crawford, O.	Kohn, Farmer E.	Paulding, O.
Cochran, Fess	Marshall, Ind.	Kersis, Peter J.	N. J.
Dwyer, Edwin	Montgomery, O.	*Kennedy, Roy	Van Buren, Mich.
Dickey, W. L.	Highland, O.	Keller, Virgie	Sandusky, O.
Dorrell, Fred	Lucas, O.	Long, Ernest	Hardin, O.
Dickson, Ethel	Hardin, O.	Luft, C. F.	Marion, O.
Dumbauld, Carl M.	Fayette, O.	Lambert, G. R.	Nicholas, W. Va.
Domka, H. F.	Westmoreland, Pa.	Lewis, W. Keller	Lorain, O.
Dormand, W. L.	Bureau, N. Y.	Lanning, C. W.	Hancock, O.
Deakins, R. M.	Allegheny, Pa.	Lucas, Gail	Lake, O.
Dobbins, E. H.	Marion, O.	Lauck, Arthur F.	Brooke, W. Va.
Epple, John A.	St. Louis, Mo.	Loy, Frank L.	Hardin, O.
Ebright, F. J.	Wayne, O.	LaRue, Forest M.	Seneca, O.
Englehart, L. N.	Preston, W. Va.	Lewis, Grace	Hardin, O.
Erickson, Henry	Alleghany, Pa.	McElwain, Edgar M.	Allen, O.
Elsass, Fred	Shelby, O.	Moon, Floyd	Marion, O.
Evans, L. O.	Putnam, O.	McClain, Blanche	Richland, O.
Englehart, Ellwood	Garrett, Md.	McWilliam, Lela	Hardin, O.
Evard, Mildred	Allen, Ind.	Moore, Cleo	Marion, O.
Fitzgerald, Jas.	Hampshire, N. Y.	Marshall, John M.	Summit, O.
Feasel, Fred	Seneca, O.	McKinley, M. P.	Mercer, O.
Fry, Clarence	Hancock, O.	McVicker, Roscoe	Guernsey, O.
Fackler, Fanny	Allen, O.	McKenzie, Thos.	Bath, Va.
Franklin, Marian	Hardin, O.	Moyer, Clarence E.	Erie, O.
Free, Charles	Ross, O.	McPheron, Kenneth	Auglaize, O.
Ferrell, C. W.	Tuscarawas, O.	Maurer, Theo.	Shelby, O.
Fredley, H. E.	Butler, Pa.	Morse, S. M.	Maricopa, Ariz.
Focht, Lyman	Auglaize, O.	McKibben, E. V.	Darke, O.
Fireoved, Landis	Richland, O.	Marshall, Dale	Hardin, O.
Fuste, Alexander	Cuba	Mowery, Walter W.	Wayne, O.
Foor, Mabel	Paulding, O.	Moore, J. H.	Marion, O.
Garlick, Sidney	Hancock, W. Va.	Moore, Wm. L.	Mahoning, O.
Garcia, Carlos M.	Porto Rico	McClurg, C. D., Jr.	Fairfield, O.
Gearhart, Ralph V.	Wyandot, O.	McWilliams, Wava	Hardin, O.
Gault, Dallas L.	Wayne, O.	Northway, M. E.	Cuyahoga, O.
Gilbreth, Glen H.	Marion, O.	Novish, Frank R.	Allegheny, Pa.
Gibbons, H. L.	Muskingum, O.	Nolte, J. F.	Blair, Pa.
Gallman, Florence	Mercer, O.	O'Flaherty, J. A.	Marion, O.
Gregg, Irving R.	Trumbull, O.	Ogan, Purley A.	Muskingum, O.
Garrett, Delwin	Morgan, O.	Parry, Ida	Greene, Pa.
Hoover, Hugh	Crawford, O.	Parry, Lissa	Greene, Pa.
Hakes, Harold	Seneca, O.	Priest, Clellan K.	Hartford, Conn.
Heibert, Arthur C.	Champaign, Ill.	Prestcott, F. A.	Calcasien, La.
Holt, Fern	Crawford, O.		

*—Deceased.

Pugh, R. P.	Logan, O.	Slager, Fred C.	Pickaway, O.
Palaez, Abel	Columbia, S. A.	Shanklin, A. E.	Hardin, O.
Pool, Clyde E.	Wyandot, O.	Smith, Dale H.	Wyandot, O.
Pratt, Edwin	Logan, O.	Tuttle, John I.	Wyandot, O.
Palaez, Anibel	Columbia, S. A.	Tyndall, Dan H.	Adams, Ind.
Paul, R. W.	Indiana, Pa.	Treece, F. Dale	Hancock, O.
Paul, I. S.	Indiana, Pa.	Tremain, Ruth	Hardin, O.
Parr, Eunice	Hardin, O.	Truax, J. C.	Summit, O.
Romaker, Herman	Henry, O.	Thompson, Blair	Lawrence, Pa.
Rees, Lloyd	Allen, O.	Tabor, Mason	Hardin, O.
Redick, Lucy	Cambria, Pa.	Tuttle, F. M.	Wyandot, O.
Rew, Clyde J.	Chataqua, N. Y.	Taggart, L. Clare	Lawrence, Pa.
Rudolph, H. L.	Washington, Pa.	Tabor, Geneva	Hardin, O.
Rehanek, Jas.	Westmoreland, Pa.	Temple, Alice	Hardin, O.
Rusher, W. G.	Hardin, O.	Vartanian, K. S.	Turkey-in-Asta
Randall, H. B.	Westmoreland, Pa.	Van Gundy, J. W.	Hardin, O.
Rinehart, R. I.	Trumbull, O.	Wirt, Orlo	Allen, O.
Rummell, F. E.	Trumbull, O.	Whittaker, Jas C.	Orange, N. Y.
Ruebel, Wm.	Hamilton, O.	Welker, Roland T.	Cuyahoga, O.
Rose, Mary	Shelby, O.	Wilson, W. D.	Paulding, O.
Reis, Lucille	Wyandot, O.	Wollam, W. L.	Hardin, O.
Sharpe, Chas. E.	Ross, O.	Williams, Marie	Putnam, O.
Shaner, Vernon	Van Wert, O.	Wing, May A.	Huron, O.
Sherry, Frank	Ashtabula, O.	Woomer, Elmer E.	Lebanon, Pa.
Skutt, Milo	Tuscarawas, O.	Wherley, Jesse S.	Tuscarawas, O.
Spellman, V. D.	Hardin, O.	Walden, L. M.	Ohio, W. Va.
Schaefer, Dallas	Paulding, O.	Wunder, Chas.	Paulding, O.
Secord, Paul	Wyandot, O.	Walker, E. A.	Adams, O.
Smith, Evelyn	Hardin, O.	Wiles, Neva	Shelby, O.
Sinkey, Dorothea	Hardin, O.	Ziegler, H. F.	Wood, O.
Solt, Dorothy	Lucas, O.	Zekus, Frank	Marion, W. Va.
Snider, Rae	Auglaize, O.	Zimmerman, D. F.	Fayette, O.
Scott, C. Exhai	Brooke, W. Va.	Zimmerman, Mrs. D. F.	Fayette, O.
Sommer, C. W.	Belmont, O.		

SPECIAL

Ailes, Sidney	Shelby, O.	Mollenkopf, J. F.	Van Wert, O.
Bardelmeier, Julius	Hardin, O.	Owens, Ernest	Westmoreland, Pa.
Black, Roy M.	Clinton, O.	O'Neil, Turland	Cuyahoga, O.
Carpenter, C. C.	Shelby, O.	Rowand, E. M.	Logan, O.
Condit, Glenn L.	Logan, O.	Rhoades, H. Albert	Fayette, Pa.
Digel, Carl	Wyoming, N. Y.	Steen, E.	Dunn, Wis.
Deemer, Guy	Paulding, O.	Sullivan, T. W.	Hardin, O.
Dobbins, Harry	Hardin, O.	Swain, Nettie	Adams, O.
Eby, Elmer L.	Montgomery, O.	Smith, Guy L.	Paulding, O.
Englehart, A. C.	Garrett, Md.	Strait, C. A.	Lycoming, Pa.
Green, R. L.	Wayne, O.	Tremain, Pearl	Hardin, O.
Harper, Estella	Mercer, O.	Wood, W. H.	Onondaga, N. Y.
Hine, Edgar	Butler, O.	Wilkin, Leroy R.	Hardin, O.
Lutz, Franklin	Hardin, O.	Witherstay, Gladys	Trumbull, O.
Murphy, T. J.	Marion, O.	Yoi, Chan	China.
Maglott, Donald	Hardin, O.		

COLLEGE OF ENGINEERING

Civil

Allcroft, A. N.	Essex, N. J.	Biggers, Wm. C.	Trumbull, O.
Auerbach, Geo.	Cuyahoga, O.	Barnett, Norman	Clarion, Pa.
Allen, A. L.	Lewis, N. Y.	Buchter, Norris	New Haven, Conn.
Baker, Lester B.	Eric, N. Y.	Batcheller, Don L.	Defiance, O.
Bandy, E. L.	Hardin, O.	Frewer, P. P.	Ross, O.
Birdsall, Albert	Kings, N. Y.	Brown, C. A.	Hartford, Conn.

- Bloise, Jose.....Porto Rico.
 Burns, Earl.....Mahoning, O.
 Bixby, Carl A.....Wyoming, N. Y.
 Boyle, E. F.....St. Lawrence, N. Y.
 Brace, Geo. R.....Lucas, O.
 Campbell, I. S.....Hudson, N. J.
 Cooke, Harry A.....Bergen, N. J.
 Cobbe, R. C.....Chautauqua, N. Y.
 Clevenger, B. J.....Roane, W. Va.
 Chick, Leslie A.....Scioto, O.
 Chamberlain, Leslie L.....
 Northumberland, Pa.
 Day, Herman L.....Sussex, N. J.
 Drummond, H. E.....Jefferson, N. Y.
 Dwyer, Edwin.....Montgomery, O.
 Dixon, C. R.....Monroe, N. Y.
 Diehl, C. W.....Trumbull, O.
 Dolen, Lemuel C.....Guernsey, O.
 Durst, Ross C.....Garrett, Md.
 Davis, B. F.....Hardin, O.
 Dutch, Wm.....Lorain, O.
 Driebelbis, H. E.....Venango, Pa.
 Evans, W. J.....Licking, O.
 Elbin, G. H.....Bedford, Pa.
 Englehardt, C. J.....Knox, O.
 Elliott, J. H.....Trumbull, O.
 Enlind, C. J.....Middlesex, Mass.
 Emtman, E. E.....Los Angeles, Cal.
 Evans, O. S.....Delaware, N. Y.
 Fritz, Chas. E.....Sullivan, N. Y.
 Fleming, J. F.....Mercer, Pa.
 Fitzgerald, Jas.....Hampshire, Mass.
 Francis, Oscar.....Allen, O.
 Graves, Geo. I.....Jefferson, N. Y.
 Gilley, J. G.....Greenup, Ky.
 Gresham, H. L.....Cuyahoga, O.
 Groesbeck, Chas.....Berkshire, Mass.
 Gamboa, F. C.....Costa Rica
 Gardner, L. H.....McLean, Ill.
 Griffith, C.....Cattaraugus, N. Y.
 Gertler, David B.....Russia
 Gregg, Irving R.....Trumbull, O.
 Harrison, Newell.....Mercer, O.
 Heeren, Carl.....Hudson, N. J.
 Hotchkiss, Birchard.....Tioga, Pa.
 Hartman, L.....Hernando, Fla.
 Helfinger, A. M.....Crawford, O.
 Harris, George.....Logan, O.
 Hine, J. H.....Butler, O.
 Hill, J. H.....Hardin, O.
 Hayden, J. E.....Worcester, Mass.
 Ingle, Carl.....Williams, O.
 Jones, Hubert.....Hardin, O.
 Kretzer, Chas. V.....Ross, O.
 Knapper, Harold C.....Huron, O.
 Kuzel, Herman F.....Queens, N. Y.
 Kelley, Patrick F.....Marion, O.
 Kauffman, R. J.....Wayne, O.
 Kurz, Harry E.....Mahoning, O.
 Kerr, Edwin.....Warren, O.
 Kneisley, H. A.....Logan, O.
 Krebs, H. R.....Cattaraugus, N. Y.
 Kapp, Clarence R.....Butler, O.
 Kirk, L. C.....Columbiana, O.
 Linton, Guy W.....Fountain, Ind.
 Long, Walter.....Huron, O.
 Lewis, W. Keller.....Lorain, O.
 Lee, Ralph A.....Jackson, Mich.
 Linder, G. E.....Mercer, Pa.
 Liddle, C. R.....Fulton, N. Y.
 Lunn, Harry H.....Dutchess, N. Y.
 Lauck, Arthur F.....Brooke, W. Va.
 Lewis, L. Glenn.....Lewis, N. Y.
 Leighinger, C. A.....Coshocton, O.
 Larson, Theo.....Kings, N. Y.
 Lyons, Isaac R.....Jay, Ind.
 Leahy, W. E.....Stark, O.
 Moore, C. L.....Harrison, O.
 McCrane, J. L.....N. Y.
 McKinnon, H. E.....Butler, O.
 Moross, W. I.....Eric, O.
 McGannon, F. E.....Jefferson, Pa.
 Miller, M.....Chautauqua, N. Y.
 Marshall, John M.....Summit, O.
 Maskery, Maurice.....Mercer, Pa.
 Miller, Clarence.....Berkeley, Mass.
 McKenzie, Thos.....Bath, Va.
 Maurer, Theo.....Shelby, O.
 Maurer, Jacob.....Auglaize, O.
 McCandless, John.....Hawaii
 Morse, S. M.....Maricopa, Ariz.
 Menescal, C. H.....Brazil
 Marshall, C. E.....Douglas, Neb.
 Montville, Hurst.....Hardin, O.
 Malaret, Albert V.....Porto Rico
 Mowery, Walter W.....Wayne, O.
 Moore, J. H.....Marion, O.
 Montgomery, W. A.....Logan, O.
 Nash, L. C.....Cass, Mich.
 Niece, F. H.....Mercer, Pa.
 Nolte, J. F.....Blair, Pa.
 O'Rourke, Glenn.....Clinton, Ia.
 Ogan, Purley A.....Muskingum, O.
 Orwig, Calvin F.....Center, Pa.
 O'Neil, John, Jr.....Washington, Pa.
 Peoples, W. L.....Tuscarawas, O.
 Penny, Frank C.....Fairfield, Conn.
 Pilliod, Carl.....Lucas, O.
 Plant, A. F.....Essex, N. J.
 Palmer, L. E.....Orleans, N. Y.
 Pool, Clyde E.....Wyandot, O.
 Parsons, F. W.....Huron, O.
 Pinto, Deo Clecido de.....
 New York, N. Y.
 Palaez, Anibel.....Colombia, S. A.
 Paul, R. W.....Indiana, Pa.
 Paul, I. S.....Indiana, Pa.
 Roberts, R. C.....Washington, Pa.
 Richards, DeForest.....Lorain, O.
 Robinson, W. D.....Mexico
 Rothermund, Theo.....Belmont, O.
 Richardson, G. O.....Marion, Ind.
 Riggerback, Carl.....Wetzel, W. Va.
 Ryan, D. M.....Guernsey, O.
 Reilly, T. W.....Sullivan, N. Y.
 Rummel, F. E.....Trumbull, O.

Rudolph, H. L. Washington, O.
 Rinehart, R. I. Trumbull, O.
 Randall, H. B. Westmoreland, Pa.
 Smith, Robt. L. Shelby, O.
 Smith, L. L. Chautauqua, N. Y.
 Spellman, V. D. Hardin, O.
 Scott, C. Ezba. Brooke, W. Va.
 Segui, Jack. Argentina.
 Sommer, C. W. Belmont, O.
 Short, P. B. Allen, Ind.
 Shie, C. H. Stark, O.
 Shauwecker, H. C. Wyandot, O.
 Stemm, J. Dudley. Jennings, Ind.
 Stump, C. W., Jr. Hampshire, W. Va.
 Smith, L. P. Warren, Pa.
 Stormer, Amer. Venango, Pa.
 Swingley, H. L. Knox, O.
 Starry, R. M. Adams, Pa.
 Schutt, Raymond. Defiance, O.
 Schultz, Guy. Paulding, O.
 Silva, Jorge. Brazil.
 Smith, Leroy. Otsego, N. Y.
 Shannon, D. G. Jasper, Mo.

ELECTRICAL

Amarel, J. P. Brazil.
 Azevedo, F. J. Brazil.
 Andrade, Paul. Brazil.
 Aimutis, F. J. Russia.
 Atkinson, Thos. J. West Chester, N. Y.
 Anspach, Kent P. Hardin, O.
 Anspach, Laurel. Hardin, O.
 Blackford, Charles. Shelby, O.
 Batt, Amos J. Lucas, O.
 Brockman, Carl. Sandusky, O.
 Bookwalter, Geo. Ross, O.
 Bedell, Wm. B. Rockland, N. Y.
 Brakes, James. Clinton, N. Y.
 Bridge, E. H. Lorisin, O.
 Bayle, Russel M. Beaver, Pa.
 Bailey, H. Berkshire, Mass.
 Baine, Geo. D. Defiance, O.
 Barnett, F. G. Buncombe, N. C.
 Brehman, L. W. Crawford, O.
 Barger, A. H. Crawford, O.
 Bridge, T. G. Erie, N. Y.
 Berlew, Russell. Duquesne, Pa.
 Bennett, Robt. H. Warren, O.
 Coutts, L. S. Brazil.
 Cordray, Geo. W. Wyandot, O.
 Campbell, I. S. Hudson, N. J.
 Clinger, D. W. Hardin, O.
 Castro, Newton He. Brazil.
 Compton, E. Ocean, N. J.
 Coates, Albert M. Butler, Pa.
 Daubenspeck, L. L. Summers, W. Va.
 Decker, Guy P. Columbiana, O.
 Diebel, Mason J. Wyandot, O.
 Dawson, W. J. Steuben, N. Y.
 Downing, H. M. Van Wert, O.

Tyndall, Dan H. Adams, Ind.
 Tinker, Miles, A. Calvert, Mass.
 Taylor, Frank. Ross, O.
 Tutchings, Thos. Fulton, N. Y.
 Tseu, Y. E. Hawaii.
 Thevenet, Edw. H. Essex, N. J.
 Urich, M. B. Lancaster, Pa.
 Whittaker, Jas. C. Orange, N. Y.
 Williams, R. J. Mahoning, O.
 Willis, W. P. Nassau, N. Y.
 Walker, E. Worcester, Mass.
 Woodward, J. W. Auglaize, O.
 Woerner, Elmer E. Lebanon, Pa.
 Walden, L. M. Ohio, W. Va.
 Wright, Foster F. Licking, O.
 Ward, F. H. Monro, O.
 Wilber, Harold. Fulton, N. Y.
 White, Manley. Chautauqua, N. Y.
 Whitmore, H. Cattaraugus, N. Y.
 Williams, J. A. Licking, O.
 Wickman, H. A. Sandusky, O.
 Yim, D. J. San Francisco, Cal.
 Young, O. B. Wayne, Mich.
 Zuelzke, Harry. Seneca, O.

Evans, F. W. Westmoreland, Pa.
 Evans, Wm. T. Lewis, N. Y.
 Foltz, Adren V. Hancock, O.
 Freeborn, C. Nassau, N. Y.
 Frazer, Carleton M. Fulton, N. Y.
 Frapwell, H. L. Hudson, N. J.
 Goldberg, D. J. Hartford, Conn.
 Gilbert, Herschel V. Darke, O.
 Huebel, Harold. Hudson, N. Y.
 Hust, H. A. Ashtabula, O.
 Hakes, Harold. Seneca, O.
 Hyle, G. E. Wayne, O.
 Iden, R. D. Wyandot, O.
 Jennings, Walter. Coshocton, O.
 Johansen, O. E. Fairfield, Conn.
 Johnson, J. St. Lawrence, N. Y.
 Kapp, Cecil A. Butler, O.
 Kitiaf, Myer. Berkeley, Mass.
 Kennedy, Urban. Shelby, O.
 Kadel, Lewis. Orange, N. Y.
 Lessa, P. B. Brazil.
 Lowe, R. E. Berkeley, Mass.
 Mase, Geo. M. Stark, O.
 Miller, Ray. St. Lawrence, N. Y.
 McAllister, Geo. Cuyahoga, O.
 McKee, R. C. Henry, O.
 Mertz, Ralph. Hardin, O.
 McKinley, H. T. Champaign, O.
 Norris, Frank W. Marion, O.
 Nordstrom, J. F. Stark, O.
 Neves, J. G. Brazil.
 Newell, J. H. Fayette, O.
 Newton, F. P. Lake, O.
 Nelson, Henry A. Franklin, Mass.
 Pickens, R. M. Hudson, N. Y.
 Parker, John M. Erie, N. Y.
 Pelaez, E. Colombia, S. A.

CHEMICAL

Miller, Ben H.....Tuscarawas, O.

COLLEGE OF LAW

Allen, F. Leroy.....	Union, O.	Mills, C. E.....	Tuscarawas, O.
Antin, Esther.....	Lucas, O.	Malloy, Howard L.....	Stark, O.
Brown, Clare A.....	Greene, O.	Mills, C. E.....	Tuscarawas, O.
Blosser, M. E.....	Wayne, O.	Neal, J. Howard.....	Clark, O.
Baser, C. J.....	Fulton, O.	Ostrander, John.....	Sandusky, O.
Burns, R. M.....	Indiana, Pa.	Ormsby, R.....	Mahoning, O.
Blackburn, H. H.....	Cuyahoga, O.	O'Leary, F.....	West Chester, N. Y.
Barger, E. S.....	Gallia, O.	O'Flaherty, J. A.....	Marion, O.
Bilderback, Wayne.....	Defiance, O.	Payne, Chas. E.....	Lawrence, O.
Buonpane, Blase.....	Mahoning, O.	Palomba, C. W.....	New Haven, Conn.
Bash, J. H.....	Allegheny, Pa.	Poling, Neil.....	Hardin, O.
Cook, C. C.....	San Bernardino, Cal.	Paine, Frank H.....	Berrien, Mich.
Connaughton, Frank.....	Allen, O.	Patchen, Guy G.....	Hardin, O.
Cowan, E. G.....	Mahoning, O.	Powell, Edw. D.....	Mahoning, O.
Dawson, A. H.....	Ross, O.	Parrett, Donald C.....	Oakland, Mich.
Dumbauld, Carl M.....	Fayette, Pa.	Reid, Orton A.....	Franklin, O.
Dormand, W. L.....	Bureau, N. Y.	Riley, Everett L.....	Lawrence, O.
Darby, A. F.....	Hardin, O.	Ritts, Frank.....	Venango, Pa.
Day, Raymond P.....	Allen, O.	Rigby, Perry L.....	Columbiana, O.
Elsass, Fred.....	Shelby, O.	Ramey, Homer A.....	Ottawa, O.
Ferrell, C. W.....	Tuscarawas, O.	Smith, Paul.....	Hardin, O.
Fackler, C. E.....	Union, O.	Simon, E. E.....	Wayne, O.
Fackler, J. R.....	Union, O.	Shaw, Marvin R.....	McKean, Pa.
Fisher, Walter.....	Darke, O.	Singer, Ernest.....	Van Wert, O.
Gibbs, Rex.....	Auglaize, O.	Shields, R. D.....	Hardin, O.
Godwin, E. L.....	Logan, O.	Skelton, B. M.....	Mahoning, O.
Hanley, Wm. H.....	Montgomery, O.	Spilka, Harvey.....	Hardin, O.
Harbour, Herschel.....	Logan, O.	Silverton, Simon.....	Stark, O.
Harrison, John K.....	Mahoning, O.	Telban, John.....	Washington, Pa.
Hachtel, E. G.....	Cuyahoga, O.	Taylor, Chas. F.....	Franklin, O.
Hill, R. C.....	Lucas, O.	Thompson, Blair.....	Lawrence, Pa.
Hamrick, Blaine.....	Harrison, W. Va.	Wolf, Oren E.....	Stark, O.
King, E. T.....	Marshall, W. Va.		

COLLEGE OF PHARMACY

Allman, R. J.....	Lackawanna, Pa.	Fisher, H. J.....	Erie, O.
Ayres, Rall M.....	Mercer, O.	Fox, Frona.....	Wayne, Mich.
Anton, Juan.....	Cuba.	Gibson, Thos. E.....	Morgan, O.
Anderson, Walter S.....	Brown, O.	Geigenheimer, Karl J.....	Erie, O.
Bloomberg, Oscar.....	Lorain, O.	Greenland, T. W.....	Allen, O.
Harr, Harold C.....	Tuscarawas, O.	Hamsher, H. L.....	Logan, O.
Burt, Chester.....	Cuyahoga, O.	Hallisy, W. C.....	Greene, O.
Barr, Raymond.....	Union, O.	Howes, Robt. W.....	Wood, W. Va.
Bain, E. E.....	Allegheny, Pa.	Heckler, Raymond.....	Washington, O.
Brast, Lewis.....	Belmont, O.	Hord, J. Lee.....	Knox, O.
Bothwell, C. W.....	Lafayette, Wis.	Hamfeldt, Hugo.....	Lucas, O.
Champion, Jesse.....	Paulding, O.	Helander, E. E.....	Ashtabula, O.
Carbo, Pedro.....	Cuba.	Johnson, Lloyd M.....	Elkhart, Ind.
Clutter, A. B.....	Hardin, O.	Jackson, Wynne L.....	Monroe, N. Y.
Clark, Raymond D.....	Adams, Ind.	Jenkins, C. H.....	Mahoning, O.
Chrispin, John W.....	Hamilton, O.	Koons, Ora A.....	Richland, O.
Canales, Lopez Juan.....	Cuba.	Klein, E. L.....	Greenup, Ky.
Cain, Earl B.....	Harrison, W. Va.	Kinney, J. P.....	Belmont, O.
Daniels, Ruth.....	Hardin, O.	Kennedy, Karl S.....	Lorain, O.
Erdenberger, Adam.....	Richland, O.	Klinger, W. E.....	Paulding, O.
Ellis, R. O.....	Cabell, W. Va.	Leslie, Clifford.....	Van Wert, O.
Evans, O. R.....	Putnam, O.	Lewis, Fred C.....	Columbiana, O.
Frohnappfel, George.....	Allen, Ind.	Leithouser, A. D.....	Henry, O.

Parsons, Wirt.....	Tucker, W. Va.	Snell, C. Roy.....	Clermont, O.
Portz, E. E.....	Coshocton, O.	Smith, R. L.....	Shelby, O.
Pratt, S. V.....	Cattaraugus, N. Y.	Schott, W. F.....	Ottawa, O.
Payne, Oliver C.....	Suffolk, N. Y.	Stephenson, H. M.....	Mercer, O.
Pilliod, Louis.....	Lucas, O.	Slater, C. G.....	Fayette, Pa.
Reilly, F. P.....	Sullivan, N. Y.	Smith, Harry R.....	Clark, O.
Riggin, W. L.....	Cumberland, N. J.	Smith, Paul S.....	Hardin, O.
Rothenberger, G. M.....	Bureau, Ill.	Truax, J. C.....	Summit, Pa.
Ries, Casper.....	Hardin, O.	Warter, E. W.....	Hudson, N. J.
Robinson, H. H.....	Hancock, O.	Vroman, E. C.....	Jefferson, N. Y.
Slusser, J. C.....	Hardin, O.	Wickerham, W. W.....	Hancock, O.
Sharp, Wm. L.....	Cumberland, N. J.	Walters, C. F.....	Licking, O.
Speece, Rex.....	Logan, O.	Wright, Claude B.....	Emmett, Mich.

MECHANICAL

Almond, L. H.....	Hamilton, Ind.	Keraivanoff, Evan D.....	Bulgaria.
Alipaz, F.....	Kings, N. Y.	Kagy, H. H.....	Stark, O.
Braitinger, Seber.....	Hardin, O.	Lambert, G. R.....	Nicholas, W. Va.
Baumler, Wilbert L.....	Erie, O.	Landon, Samuel.....	Butler, O.
Brownlee, F. L.....	Washington, Pa.	Luft, C. F.....	Hardin, O.
Briggs, R. W.....	Ross, O.	Lovell, C. V.....	Hardin, O.
Balz, H. J.....	Philadelphia, Pa.	Maitland, I. B., Jr.....	Lycoming, Pa.
Bedell, Harry R.....	Allegheny, Pa.	Miller, B. R.....	Laporte, Ind.
Bussiere, A.....	Brazil.	Moore, Meade.....	Butler, Pa.
Barger, A. H.....	Crawford, O.	Malloy, Henry I.....	Mahoning, O.
Bane, Robt. G.....	Wayne, Mich.	McGuire, J. L.....	Westmoreland, Pa.
Curtis, A. B.....	Montgomery, O.	Norrick, Herbert.....	Knox, O.
Clelland, Ford.....	Oneida, N. Y.	Notman, Guy W.....	Stark, O.
Collezo, Frederick A.....	Porto Rico	Phillips, W. P.....	Cattaraugus, N. Y.
Dobbins, H. C.....	Hardin, O.	Robinson, D. Harold.....	Lucas, O.
Daggett, Walter E.....	Lucas, O.	Rew, Clyde J.....	Chautauqua, N. Y.
Eshbaugh, Claude E.....	McKean, Pa.	Rice, Edgar C.....	Tuscarawas, O.
Epple, John.....	St. Louis, Mo.	Smith, Floyd V.....	Henry, O.
Fisher, E. H.....	Butler, Pa.	Shutt, Milo.....	Tuscarawas, O.
Fyke, F. C.....	Williams, O.	Shilling, Oscar.....	Shelby, O.
Fyke, J. Clifford.....	Williams, O.	Tseu, Yuk En.....	Hawaii.
Geisel, Claude J.....	Lorain, O.	Titus, Henry S.....	Chautauqua, N. Y.
Gelineau, E. E.....	Middlesex, Mass.	Teany, A. C.....	Essex, N. J.
Grove, Gerald N.....	Branch, Mich.	Thomas, Wm. S.....	Essex, N. J.
Green, Harry V.....	Belmont, O.	Voelker, Edw. D.....	Delaware, Pa.
Garber, Ralph.....	Tuscarawas, O.	Wright, Lauren.....	Erie, Pa.
Gilbreth, G. Earle.....	Marion, O.	Ward, Everett.....	Wayne, Mich.
Hazen, Stuart D.....	Lake, O.	Walter, C.....	Chautauqua, N. Y.
Heckstein, Robt. W.....	Crawford, O.	Woodworth, N. A.....	Hardin, O.
Herzog, C. W.....	Lucas, O.	Young, J. H.....	Allegheny, Pa.
Hurd, E. G.....	Johnson, Kan.	Zimmerman, R. W.....	Madison, O.
Judson, H. R.....	Richland, O.		

ARCHITECTURE

Brand, H. H.....	Chautauqua, N. Y.	Mellinger, A. E.....	Clinton, Ind.
Carlson, Paul R.....	Lawrence, Pa.	Neimyer, E. W.....	Lackawanna, Pa.
Given, R. M.....	Coshocton, O.	Newkirk, A. C.....	Montgomery, Ind.
Honsinger, F. T.....	Herkimer, N. Y.	Oldham, R. S.....	Wood, O.
Lent, Henry W.....	Athens, O.	Polansky, Morris.....	

MINING

Cafferty, J. B.....	Warren, O.	Epshtein, David.....	Russia.
Dantam, Richard.....	Mexico	Palacz, Abel.....	Colombia, S. A.

MUNICIPAL AND SANITARY

Armstrong, J. F.....	Mercer, N. J.	Hibbs, A. S.....	Summit, O.
Alden, C. R.....	Washington, O.	Law, Chas. W.....	Cattaraugus, N. Y.
Groft, J. A.....	Fayette, Pa.		

Miller, Arthur W.	Allen, Ind.	Strayer, R. B.	Fairfield, O.
Morales, Escolastico	Cuba	Simpson, E. B.	Indiana, Pa.
Miley, M. C.	Guernsey, O.	Sullivan, D. C.	Huntingdon, Pa.
Murphy, Loretta	Marion, O.	Shenfield, Philip	Ottawa, O.
Newbold, Chas. E.	Hardin, O.	Shank, Wm. Robt.	Portage, O.
Newton, Clifford	Washington, O.	Simon, Herman H.	Wood, O.
Novish, F. R.	Allegheny, Pa.	Swigert, Chas. Fry	Keymar, Mr.
Neil, C. F.	Ashtabula, O.	Smith, Chester	Erie, O.
Otermat, Oscar	Sandusky, O.	Taugher, Raymond A.	Knox, O.
Ohler, Leonidas L.	Sandusky, O.	Thompson, Chas.	Putnam, O.
Prose, E. E.	Pickaway, O.	Tum, E. H.	Crawford, O.
Pense, Harley E.	Montgomery, O.	Wall, Marion	Brown, O.
Pense, Earl	Montgomery, O.	Wagner, R. A.	Montgomery, O.
Powell, D. G.	Cuyahoga, O.	Woodward, H. H.	Stark, O.
Preston, Eugene	Hardin, O.	Whiteman, C. A.	Auglaize, O.
Parsons, Robt. W.	Erie, O.	Wilch, Scott	Hancock, O.
Ritter, E. J.	Stark, O.	White, Ralph	Braxton, W. Va.
Rutter, C. H.	Belmont, O.	Winkler, Virgil	Tuscarawas, O.
Shaw, George Lee	Highland, O.	Webster, Earl	Erie, O.
Spoon, Byron	Hardin, O.	Walsh, John R.	Miami, O.
Schaff, Orville W.	Columbiana, O.	Yates, Nelson	Hardin, O.
Seibert, Geo. W.	Sullivan, N. Y.	Yarnelle, E. M.	Harrison, O.
Sutherin, H. L.	Columbiana, O.		

COLLEGE OF COMMERCE

Business

Alvarez, Vincente	Porto Rico	Moran, Ages C.	Allen, O.
Anderson, Ammert	Allegheny, Pa.	Miller, Ferne	Marion, O.
Bell, Nelson D.	Pickaway, O.	Nelson, Henry	Franklin, Mass.
Bloise, P. A.	Porto Rico	Neate, R. H.	Van Wert, O.
Bau, C. C.	China	Orwig, C. F.	Center, Pa.
Baird, J. L.	Washington, Pa.	Pettit, C. H.	Wyandot, O.
Bennett, A. J.	Monroe, N. Y.	Phillips, W. R.	Cattaraugus, N. Y.
Brown, Howard	Ashland, O.	Pickering, Roy	Hardin, O.
Barber, R. H.	Mercer, Pa.	Reck, W. F.	Miami, O.
Barber, J. M.	McKean, Pa.	Rhode, J. C.	Jefferson, O.
Binkley, Grace	Allen, O.	Reitz, J. Arthur	Lawrence, Pa.
Boerger, Paul	Shelby, O.	Ragan, Kathryn	Henry, O.
Cessna, C. L.	Hardin, O.	Stratton, G. W.	Jefferson, O.
Cotner, Clifford	Allen, O.	Spencer, Parke	Montgomery, Ind.
Cummings, Hazel	Hardin, O.	Schauwecker, E.	Wyandot, O.
Cottrell, G. W.	Jefferson, O.	Steinback, J. J.	Cook, Ill.
Clutter, D. V.	Hardin, O.	Smith, Paul V.	Hardin, O.
Detling, Charles	Belmont, O.	Smith, Vergon	Hardin, O.
Engh, C. A.	Cambria, Pa.	Smith, H. B.	Wyoming, N. Y.
Ferreira, E. C. D.	Portugal	Schoonover, Harry	Hardin, O.
Freytog, Edward	Shelby, O.	Stober, Olive	Hardin, O.
Fields, Ralph E.	Hardin, O.	Schaefer, W. C.	Cuyahoga, O.
Grubb, C. H.	Allen, Ind.	Shuster, Fred	Hardin, O.
Gault, Dallas	Wayne, O.	Tremain, Pearl	Hardin, O.
Hiveley, J. D.	Hardin, O.	Tomb, R. C.	Cambria, Pa.
Hoover, Hugh	Crawford, O.	Taft, Sara J.	Allen, O.
Hayes, H. E.	Lawrence, O.	Walker, R. D.	Morgan, O.
Hixenbaugh, C.	Wetzel, W. Va.	Willis, Leroy	Delaware, O.
Kimble, Roy	Hardin, O.	Weber, A. C.	Fulton, O.
Kissell, Adella	Bedford, Pa.	Wirth, H. P.	Orleans, N. Y.
Keaser, Glen D.	Auglaize, O.	Wilcox, C. J.	McLean, Ill.
Lowe, J. C.	Stark, O.	Winter, B. J.	Hardin, O.
Montgomery, Chas.	Hardin, O.	Wunder, Charles	Paulding, O.
Morales, C.	Mexico	Welker, Gofdia	Hardin, O.
McColgan, R. J.	Jackson, Mich.	Yoshida, Koji	Cook, Ill.
Murphy, D. C.	Belmont, O.	Zeigler, Harvey	Wood, O.

Stenography

Alvarez, Vincente.....	Porto Rico	McColgan, R. T.....	Jackson, Mich.
Anglade, Andres.....	Porto Rico	Messenger, H. F.....	Green Lake, Wis.
Bilderback, Wayne.....	Defiance, O.	Nelson, Carl.....	Hardin, O.
Christie, B. K.....	Indiana, Pa.	Ross, H. A.....	Wood, O.
Cummings, Hazel.....	Hardin, O.	Rutter, Ilo.....	Hardin, O.
Cessna, C. L.....	Hardin, O.	Spilka, Harvey.....	Hardin, O.
Elson, Harold J.....	Tuscarawas, O.	Smith, Roy M.....	Wyoming, N. Y.
Hugh, Albert.....	Harrison, O.	Seresun, George.....	Guernsey, O.
Hawes, Esther.....	Hardin, O.	Taft, Sara J.....	Allen, O.
Johnson, H. O.....	Washington, Pa.	Velde, Merle.....	Tazewell, Ill.
Kinney, Imogene P.....	Hardin, O.	Will, Albert M.....	Wyandot, O.
Lowe, J. C., Jr.....	Stark, O.	Wickiser, Mabel.....	Hardin, O.
McLaughlin, T. B.....	Hardin, O.	Yaple, M. L.....	Ross, O.
Moran, Agnes.....	Allen, O.		
Metz, Ruth.....	Greene, O.		

SCHOOL OF PUBLIC SPEAKING

Bilderback, Wayne.....	Defiance, O.	Koontz, Irwin.....	Hardin, O.
Brown, Leah.....	Hardin, O.	Ley, Leona.....	Van Wert, O.
Brown, C. A.....	Hartford, Conn.	Leighinger, C. A.....	Coshocton, O.
Brehman, L. W.....	Crawford, O.	Manahan, Wm. L.....	Logan, O.
Booher, Ilo.....	Van Wert, O.	Manahan, H. A.....	Logan, O.
Deemer, Guy.....	Paulding, O.	Murray, Thomas.....	Kerny, N. J.
Davis, Mrs. S. B.....	Hardin, O.	Marshall, J. K.....	Summit, O.
Deakins, R. A.....	Allegheny, Pa.	Maitland, I. B., Jr.....	Lycoming, Pa.
Dibble, Ray M.....	Putnam, O.	Moyer, Clarence E.....	Erie, O.
Ewing, Helen.....	Hardin, O.	Neimyer, E. W.....	Lackawanna, Pa.
Evans, Wm. T.....	Lewis, N. Y.	Nash, L. C.....	Cass, Mich.
Fisher, Runison.....	Morrow, O.	Patchen, G. G.....	Indiana, Pa.
Freeman, Harold.....	Hardin, O.	Penny, Mrs. Hazel.....	Allen, O.
Forress, Mrs. Winona.....	Allen, O.	Parrett, Donald.....	Oakland, Mich.
Frapwell, H. L.....	Hudson, N. J.	Ryan, D. M.....	Guernsey, O.
Flowers, Vera.....	Hardin, O.	Runser, Imogene.....	Hardin, O.
Groesbeck, C. H.....	Berkshire, Mass.	Steen, E.....	Dunn, Wis.
Groft, J. A.....	Fayette, Pa.	Spielman, Chas.....	Cuyahoga, O.
Heitzman, Harold.....	Putnam, O.	Swain, Nettie.....	Adams, O.
Holt, Fern.....	Crawford, O.	Schrock, Carrie.....	Fayette, O.
Imhoff, G. C.....	Richland, O.	Schott, W. F.....	Ottawa, O.
Johnson, R. S.....	Crawford, O.	Wooly, Matilda.....	Hardin, O.
Jones, Blodwyn.....	Hardin, O.	Young, O. B.....	Wayne, Mich.

SCHOOL OF FINE ARTS

Burnette, Elizabeth.....	Hardin, O.	Krofft, Vera.....	Hardin, O.
Brown, Lela.....	Hardin, O.	Lapp, Salome.....	Logan, O.
Crider, Florence.....	Union, O.	Mann, Brice.....	Hardin, O.
Cordier, Amanda.....	Summit, O.	Mason, Lutie.....	Ashtabula, O.
Davidson, Alma.....	Scioto, O.	Patterson, Mabel C.....	Logan, O.
Dobbins, Hazel.....	Hardin, O.	Patrick, Agnes.....	Allegheny, Pa.
Gottschall, Eva.....	Mercer, O.	Rothrock, Fern.....	Seneca, O.
Heiser, Maude.....	Wood, O.	Smith, Rachel.....	Hardin, O.
Harvey, Mrs. H. D.....	Hardin, O.	Stewart, Daisy.....	Van Wert, O.
Jordon, Esther G.....	Campaign, O.	Sprain, Goldie.....	Van Wert, O.
Kirby, Howard.....	Hardin, O.	Sweetland, Mary.....	Logan, O.
Kunzie, Elsie.....	Erie, O.	Vergon, Faye.....	Delaware, O.

COLLEGE OF AGRICULTURE

Ash, Ralph.....	Hardin, O.	Haddox, Merritt L.....	Hancock, O.
Ash, Elmer.....	Hardin, O.	Hunter, H. S.....	Shawnee, Mich.
Chandler, Horace.....	Wyandot, O.	Henry, E. O.....	Somerset, Pa.
Elmer, G. D.....	Wayne, Mich.	Long, George.....	Hardin, O.
Fox, Walter.....	Wyandot, O.	McWilliam, Durbin.....	Hardin, O.

rare one, meteorites, plant and animal fossils representing the chief orders of geological importance, the shells and skeletons of many living molluscs and vertebrates. The zoological alcove exhibits about 200 birds representing one or both sexes of nearly all of those common to this region, all animals, native to Ohio, many kinds of snakes, and several hundred specimens of the orders of invertebrates preserved in jars. For illustration in anatomy a human skeleton and structural models of various organs are at hand. All persons interested in the cause of education are kindly invited to make donations of specimens—geological, mineralogical, zoological, botanical, historical, Indian relics, any kind whatever—to the University. Specimens labeled with the name of the donor will be placed on exhibition.

The University Library is open each day of the week for the convenience of students.

The attention of the Alumni and all interested is called to the imperative necessity of increasing the library, so greatly damaged by the fire a year ago. Any contributions of libraries and single volumes, practically serviceable in research work in any of the fields of knowledge, will be gratefully received and acknowledged.

Within four squares of the Campus, adjacent to the student rooming section of the town, lie the Athletic Grounds, owned and controlled by the University, on whose area of eight acres the Baseball Diamond, the Football Gridiron, the Running Tracks, the Lawn Tennis Courts, and the Military Parade and Contest Field are located.

The U. S. A. Government supplies a military equipment which at present is under the management of Lieut. Ray Corson Hill, U. S. A.

The University possesses a tract of land within a block and a half of the campus, containing fifty acres of rich, productive soil under cultivation. Here the Agricultural buildings are to be erected and, in the near future, a well equipped College of Agriculture, already organized in part and giving instruction, will be devoted to the practical demonstration of farm methods and problems, and to the training of young men and women to stay by the land and to realize that independence, culture, social development and free life are to be attained in rural districts as well as in the city.

Montgomery, R.....	Muskingum, O	Van Buren, Keith.....	Hardin, O.
Rabinowich, Isaac.....	Suffolk, Mass.	Van Buren, Vernon.....	Hardin, O.
Reed, E. H.....	Morgan, O.	Wilson, Harold F.....	Licking, O.
Rowe, Fred I.....	Seneca, O.	Warbington, L. F.....	Shelby, O.
Storer, Stacy S.....	Clemont, O.	Ziegler, H. F.....	Wood, O.
Smith, Earl Roy.....	Union, O.		

The names of students of the College of Music will be published in the new Music Bulletin which will be issued soon.

UNIVERSITY BULLETIN

Published in June, July, September, November, January, April and May by the Ohio Northern University. Ada, Ohio. Entered as second-class matter July 3, 1907, at the postoffice at Ada, Ohio, under the Act of Congress on July 16, 1894.

Rooms, Boarding and Home Comforts

The University has no dormitory, owns no boarding-house, nor feeds its impecunious students in the basements of its buildings. The matter of rooming and boarding students is left to the large number of families engaged in this business for a livelihood. Because of brisk competition, good, substantial living is offered at a remarkably low cost.

Good board in private families cost from \$1.70 to \$2.75 a week.

Furnished rooms, two in a room, 60 cents to \$1.25 each a week.

The town is lighted with electricity; coal is the chief fuel, and many houses are heated by hot-air furnaces, gas, or with hot water from the city heating plant.

The comfort and convenience of the student is looked after by a kind people; when sick he is well cared for.

For cost of tuition, see "Expense" under the various schools and colleges. Needful expenses are reduced to a minimum.

Rooming Houses for Women

Young ladies coming from homes outside of Ada, are required to room in houses kept exclusively for women. The University will assist in securing rooming places for all young ladies, and carefully superintend all things pertaining to their welfare.

Scholarships

The University has received through generous donors four scholarships of \$1000.00 each, the income of which, amounting to \$50.00 to \$60.00 per year, is to be devoted to the assistance of worthy students.

The recipients of these incomes may be chosen by the donors, and when not so chosen, shall be selected by the President and the Faculty of the University. They are as follows:

1. The J. T. Cunningham Scholarship, by M. E. Cunningham, Mrs. L. A. Cunningham and George T. McCoppin, Ada, O.
2. The George Franklin Getty Scholarship, by George F. Getty, Los Angeles, Cal.

3. The James E. and Caroline Purvis Scholarship, by James E. Purvis, Bremen, O.

4. The Justin Brewer Scholarship, by Justin Brewer, Ada, Ohio.

Prizes

Through the President of the University prizes of \$15 and \$10 are awarded to winners in an annual Oratorical Contest among the three Literary Societies. This contest is one of the attractive features of Commencement week.

Hon. I. N. Kuhn, of Waynesburg, Pa., an alumnus, has provided for two annual prizes of \$15 and \$10 to be given to the successful contestants in the Franklin Literary Contest.

Miss Pearl A. M. Stahl offers \$15 and \$10 prizes annually to the two successful members of the Philomathean Society.

Dr. George W. Crile, of Cleveland, an alumnus of the Adelphean Literary Society, has permanently provided for \$15 and \$10 prizes for the winners in that Society.

Mr. George F. Getty, '79, offers \$15 and \$10 prizes annually to the members of the Philomathean Society winning honors in debate.

Aid to Students

The Board of Education of the Methodist Episcopal Church lends money to members of that church taking a regular course in school, who have been in attendance long enough to merit a recommendation from the Faculty. No interest is charged if the debt is paid within five years from the time of leaving school, but a payment of \$5.00 each year must be made on the principal, after the applicant quits school. The only security required is a recommendation from a quarterly conference. Loans are made at the beginning of each quarter. Application should be made two weeks before the opening of the quarter and no applicant can be received later than the close of the first week of the quarter. The maximum amount allowed to each applicant is \$50 a year.

For further information, address The University.

Many students in the University make their entire expenses by working as waiters, janitors, and at other occupations in the town and vicinity, and at the same time, carry full work in studies.

Literary and Debating Societies

Three flourishing Literary Societies, chartered, and meeting in well furnished assembly rooms, are maintained by the students exclusively—the Franklin, Philomathean and Adelpian. In addition to the advantages offered in public speaking, these organizations have been the conservators of enthusiastic energy, genuine social enjoyment and loyal devotion to the school.

Under the supervision of the societies numerous clubs are organized each term for practice in debate and extempore speaking.

Y. M. C. A. and Y. W. C. A.

The Young Men's and Young Women's Christian Associations have enthusiastic organizations in the University and wield a most wholesome influence on the lives and habits of the students.

The Young Men's Christian Association is affiliated with the World's Christian Federation and is under the direction of the State and International Committees.

The Young Women's Christian Association has a strong organization in the University, with a membership including about ninety per cent. of the young women in attendance at the school.

A devotional meeting open to all the University women is held weekly. At the beginning of each quarter Bible and Mission Study classes are organized under efficient teachers.

The Association is supporting a child in an orphanage in India, and also contributes to the maintenance of a General Y. W. C. A. Secretary in India.

Both Y. M. C. A. and Y. W. C. A. Bible Study classes and religious meetings are open respectively to all men and women enrolled in the University.

Clubs

A number of live literary, social, athletic and professional clubs are supported by the students, among which the following are prominent:

Der Deutsche Verein, organized each year by the students interested in German. The work is linguistic and literary in character, a special feature of each program being the **conversationstunde** on some topic calling out the language of business and social life. English is tabooed at the club meetings.

The Cosmopolitan Club is a spirited organization of the foreign students attending the University. The object is to promote good feeling among the representatives of the different nationalities, to familiarize its members with the customs, resources and view points of the several countries, to afford practice in the use of English and to establish a social centre for mutual help and encouragement.

The Intercollegiate Debating Club arranges for and engages in debates between Ohio Northern and other institutions. Membership is open to any one interested in the object of the club, irrespective of department. The selecting and coaching of debaters for any inter-collegiate contest is in charge of a faculty committee chosen by the club. Out of six inter-collegiate debates last year, Ohio Northern won four.

Several "State" clubs, have been formed for mutual cheer and help, and to keep in sympathetic touch with affairs and events of their respective states.

Athletics

College teams in baseball, football, basketball, and track athletics are maintained. Interdepartmental, interclass and intersociety sports are also encouraged.

The department of Athletics is managed by a Board of Directors, comprised of the Faculty Committee on Athletics (appointed by the President of the University), the Athletic Director, and a student member for each college sport; the student members being elected by the Athletic Association, a student organization, to which any student of the University may belong.

In response to a petition of the young men of the Institution,

an Athletic Fee has been added to the regular tuition for the first three quarters of the year. \$1.00 is charged each quarter, to be devoted to the support of the Athletics of the Institution. Young ladies may pay the fee at their option. No fee is charged for the Summer Quarter. All paying \$1.00 each a quarter will receive ticket of admittance to all athletic events free of charge.

Military Drill Compulsory

Every able-bodied male student intending to complete any of the University curriculums, or taking work necessitating two years or more of attendance, is required to drill and recite in this department three quarters and "go through contest."

Government

The opportunities and advantages of the University are offered to all sincerely desiring to develop the best in themselves, and aiming at a broad culture and a thorough preparation for useful service. Hence self-government is made the key-note in discipline. All are treated as ladies and gentlemen until they prove themselves otherwise. Incurable and morally corrupt persons are summarily dismissed from the institution. Every possible help is afforded in the formation of right habits, but those who cannot govern themselves are not wanted. This institution does not pose as a "reform school."

Regular attendance upon class work, prompt response to duty, and thoroughness in all assigned tasks are insisted on, not more for their bearing on scholarship than for their effect upon conduct and life.

Moral and Religious Culture

Mere intellectual and physical training apart from moral and religious culture results in deformity of character. Much attention, therefore, is given to awakening and fostering an aspiration to attain to the highest type of Christian manhood and womanhood.

While the University is the property of the West Ohio Conference of the Methodist Episcopal Church and is denominational in its ownership and control, it is in no sense sectarian. Stu-

dents of all religious denominations are received on equal terms and treated with equal consideration. They are urged to identify themselves with the work and participate regularly in the services of the church of their choice. The six churches of the city cordially welcome students to their religious and social meetings.

Convocations are held each school day, except Monday, from 8:00 to 8:30 a. m. The aim of which is not only to recognize the duty and privilege of daily devotions, but to foster a university spirit by bringing together into one assembly the students of the several Colleges to listen to practical addresses and talks from members of the faculty and others, and to be entertained by those connected with the Colleges of Music and Expression.

Reports to Parents and Guardians

Should any parent or guardian desire to acquaint himself with his son's or ward's standing in the work of any quarter, a report may be had by addressing a request to the President. Such reports will be made out and sent only on request and at the close of a quarter's work.

Departments of the University

- I. The Preparatory School.
- II. The College of Liberal Arts.
- III. The College of Education.
- IV. The College of Engineering.
- V. The College of Commerce.
- VI. The College of Law.
- VII. The College of Pharmacy.
- VIII. The College of Music.
- IX. The School of Expression.
- X. The School of Fine Arts.
- XI. The College of Agriculture.
- XII. The Department of Military Instruction.

THE PREPARATORY SCHOOL

FACULTY

ALBERT EDWIN SMITH, D. D., Ph. D.,
President.

CHILDE HAROLD FREEMAN, B. S.,
Principal.
English.

HENRY WHITWORTH, A. B.,
Latin.

RICHARD HOLMES SCHOONOVER, A. M.,
English Grammar, Greek.

WILLIAM GROTH, A. B.,
Modern Foreign Languages.

FRANK LEWIS BERGER, A. B.,
Physics.

LAWRENCE LEROY LOUTHIAN, A. M.,
History.

LEAH ASCHAM, A. B.,
Algebra, Geometry.

CHARLES ANDREW FRITZ, A. M.,
Composition, Rhetoric.

ANDREW SCOTT STAUFFER,
Physiology, Botany.

Aim

The Preparatory School is organized for the purpose of (1) preparing students for college entrance, (2) affording an opportunity to any desiring to complete the work commonly required in first-class high schools.

The courses of study in the preparatory school are arranged to meet the usual requirements for college entrance, the minimum of which is fifteen units. The time value of a unit is 120 clock-hours of class periods; two hours of laboratory work considered equivalent to one recitation or class period.

The subjects, distributed by years and terms as shown in the schedules following, are to be taken, as far as possible, in the order indicated.

If a student on completing the preparatory curriculum, desires to enter college elsewhere, a certificate is issued, showing that the entrance work has been finished. This certificate is accepted in lieu of entrance examinations by the Ohio State University and other leading colleges, Ohio State Medical Board, and by the Supreme Court of Ohio in lieu of the "preliminary" to the bar examinations.

Preparatory to Collegiate Courses for A. B. Degree

FIRST YEAR	SECOND YEAR	THIRD YEAR
English Composition.	Plane Geometry 2.	English Literature 3.
Algebra 1.	Caesar 2.	Anabasis 1, or German 4, or French 4.
Beginning Latin 1.	Preparatory Rhetoric 1	Physics 1.
		Virgil 2.
Algebra 2.	Greek 1, or German 1, or French 1.	Anabasis 2, or German 5, or French 5.
Beginning Latin 2.	English Literature 2.	Physics 2.
Ancient History	Cicero 1.	Virgil 3.
Algebra 3.	Greek 2 or German 2, or French 2.	Physical Geography.
Beginning Latin 3.	Preparatory Rhetoric 2.	Physics 3.
English Literature 1.	Cicero 2.	American Hist. and Civil Government 1.
Plane Geometry 1.	Greek 3, or German 3, or French 3.	American Hist. and Civil Government 2.
Caesar 1.	Cicero 3, and Virgil 1.	Med. and Mod. Hist.
Preparatory Botany	American Literature	Adv. Eng. Grammar.

Preparatory to Collegiate Courses for B. S. Degree

FIRST YEAR	SECOND YEAR	THIRD YEAR
English Composition Algebra 1. Beginning Latin 1.	Preparatory Rhetoric 1. Plane Geometry 2. Caesar 2.	German 4, or French 4, or Spanish 4. American History and Civics 1. Physiology 1. English Literature 3.
Ancient History. Algebra 2. Beginning Latin 2.	German 1, or French 1, or Spanish 1. English Literature 2. Physics 1.	German 5, or French 5, or Spanish 5. American History and Civics 2. Physiology 2.
English Literature 1. Algebra 3. Beginning Latin 3.	German 2, or French 2, or Spanish 2. Preparatory Rhetoric 2. Physics 2.	Solid Geometry. Preparatory English History. Physical Geography.
Preparatory Botany Plane Geometry 1. Caesar 1.	German 3, or French 3, or Spanish 3. Physics 3. American Literature	Med. and Mod. Hist. Adv. English Grammar.

DESCRIPTION OF COURSES

English

1. **English Composition.** (Sykes). This course includes a brief review of grammar, theme writing, paragraph writing, sentence structure, word study, capitalization, punctuation; the writing of letters, telegrams, business forms, etcetera. Some attention is given to versification. Stevenson's "Treasure Island" is read. Short daily themes are required.

2. **Rhetoric I.** Narration and description. This course is closely co-ordinated with English literature. Stevenson's "Kidnapped" is carefully studied. The theme work is largely based upon the literature the student has studied. Three short themes are required each week, and five long themes for the quarter. Prerequisite: Course 1.

3. **Rhetoric II.** Exposition and argumentation. The aim of this course is to teach the student to write clearly. The

home work is based upon physics, physiography, civics, history and literature. There is practice in brief making and debating. Macaulay's *Essays on Lord Clive and Warren Hastings* are carefully studied. Prerequisite: Course 2.

4. **English Literature I.** This course is designed for those beginning the study of English literature. The following classics are read: Shakespeare's *The Merchant of Venice*; Coleridge's *The Rime of the Ancient Mariner*; Scott's *The Lady of the Lake*; Goldsmith's *The Deserted Village*; Goldsmith's *The Vicar of Wakefield*; Gaskell's *Cranford*; Gray's *Elegy*; Scott's *Ivanhoe*. Attention is given to the biographies of the authors and to versification. Prerequisite: Course 1.

5. **English Literature II.** (Long). This course includes (1) a study of the History of English literature to the Age of Romanticism; and (2) the study of the following classics: Eliot's *Silas Marner*; Browning's *Shorter Poems*; Thackeray's *English Humorists*; Palgrave's *Golden Treasury*; Shakespeare's *Julius Caesar*, and selections from Huxley. Prerequisite: Course 5.

6. **American Literature.** (Halleck). A brief survey of the history of American literature is given. The following classics are read: Selections from Lincoln; Irving's *Sketch Book*; selected poems of Bryant, Longfellow, Whittier, Poe, Lowell, Lanier; Hawthorne's *The House of Seven Gables*.

7. **English Literature III.** (Long). This course includes (1) the history of English literature beginning with the Age of Romanticism; and (2) the study of the following classics: Carlyle's *Essay on Burns*; or Macaulay's *Life of Samuel Johnson*; Burke's *Speech for Conciliation*, or Washington's *Farewell Address* and Webster's *First Bunker Hill Address*; Shakespeare's *Macbeth*; Milton's *Comus*, *L'Allegro*, *Il Penseroso*. In each of the courses, 4, 5, 6, and 7, a number of short papers are required. Prerequisite: Course 6.

Mathematics

1. **Algebra I.** (Wentworth). Algebraic notation, simple equations, positive and negative numbers, fundamental processes as applied to algebraic numbers, special rules, factoring, common factors and multiples.

2. **Algebra II.** (Wentworth). Fractions, fractionalequations, simultaneous equations, simple indeterminate equations, inequalities, involution and evolution, theory of exponents, radicals.

3. **Algebra III.** (Wentworth). Imaginary expressions, quadratics, ratio and proportion, progressions, variables and limits, properties of series, binominal theorem, logarithms.

4. **Geometry I. Plane.** (Wentworth and Smith). Principles and definitions, demonstrations and theorems. Special stress is laid on original exercises and numerical problems.

5. **Geometry II. Plane.** (Wentworth and Smith). Continuation of course 4.

History

1. **Ancient History.** (Myers). An introductory study of the ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne (814). Fall Quarter.

2. **Mediaeval and Modern History.** (Myers). From the death of Charlemagne to the present time. Winter and Summer Quarters.

3. **English History.** (Cheyney). An introductory study of the growth of the English nation. Spring Quarter.

4. **American History.** (Channing). An elementary course in the history of the American nation from 1492 to the present time. Fall and Summer Quarters.

5. **Civics.** (Guitteau). A elementary course in American government. Winter Quarter.

Science

1. **Physics I.** Class work and individual laboratory work in motion, force, energy, machine, properties of matter and dynamics of fluids. Four hours a week the first half of the quarter and six hours a week the last half are spent in individual laboratory work by each student.

2. **Physics II.** Lectures and recitations on sound, heat and light. Each student spends sixty hours in individual laboratory work on these subjects.

3. **Physics III.** Lectures, recitations and demonstrations in magnetism and electricity. Sixty hours in experimental demonstrations, measurements and testing are required of each student.

4. **Physiology I and II.** A course in Human Physiology for teachers and for students preparing for examinations. The laboratory work covers the Harvard Entrance Requirements, and much of it can be adapted to schools where the teacher and pupils furnish all of the apparatus and materials. Many demonstrations are given by the instructor which are too difficult for the student to do alone. Students are assigned desk outfits, two at each table, for the purpose of assisting each other in manipulation and observation.

5. **Physical Geography.** A study of earth forms and processes and the geography of plants and animals. The work is based upon Salisbury's *Physiography* (briefer course), and due attention is given to laboratory and field work.

6. **Preparatory Botany.** (Phanerogamic). A study of the germination, growth and reproduction of flowering plants, including plant structure, physiology and classification. The subject matter of this course is similar to the work of the best high schools that are well equipped and do a large amount of laboratory work.

Latin

1. First lessons based on Jenner and Wilson's "Caesar's First Campaign." Five hours a week. Three quarters. Roman Pronunciation. First twenty-nine chapters of Book I., Caesar's Gallic War.

2. Caesar's Gallic War, Books II., III., IV., and prose composition. Five hours a week. Two quarters. Emphasis is laid on prose composition as a means of acquiring a working knowledge of Latin syntax. Walker's, or any quantity-marked, text is used. Pearson's Prose Composition.

3. Cicero and prose composition; six orations, including the four against Catiline and the Manilian Law. Five hours a

week. Two and one-half quarters. Allen and Greenough, or any quantity-marked text, is used. Pearson's Prose Composition.

4. Virgil's *Aeneid*, six books. Prosody, especially dactylic verse. Five hours a week. Two and one-half quarters. Knapp's Virgil.

Greek

1. First lesson based on White's "First Greek Book." Five hours a week. First quarter, lessons 1-27; second quarter, lessons 28-54; third quarter, lessons 55-80.

2. Xenophon's *Anabasis*, four books. Goodwin's text. Five hours a week. Two quarters.

German

1. German I. Pronunciation, elements of grammar, easy reading, practice in speaking and writing German.

2. German II. Continuation of course I.

3. German III. Drill on grammar, memorizing of colloquial sentences, readings, translations of colloquial praxis.

4. German IV. Reading and translation of masterpieces of representative German authors, study of syntax, prose composition, conversational praxis.

5. German V. Study of German classics, prose composition.

French

1. French I. Pronunciation, grammar, reading, composition and oral exercises.

2. French II. Continuation of course I.

3. French III. Reading, grammar and exercises.

4. French IV. Reading and translation of French masterpieces, studies in syntax, conversational praxis.

5. French V. Study of French classics, conversational praxis.

Review of Common Branches

Classes for review of the "common branches" are formed in the Normal School, to which students of the Preparatory School are admitted if they so desire.

OHIO NORTHERN UNIVERSITY BULLETIN

New Series.

ADA, OHIO, JANUARY, 1915

Vol. VIII., No. 4.

This issue of the Bulletin gives information regarding courses of study for 1915, tuition-rates, cost of board and rooming, conditions of entrance, calendar, roster of names for 1914, and other matters of interest to prospective students.

A glance at the following pages will reveal to the old-time student of Ohio Northern the changes for the better that have taken place in material equipment, enlarged courses and elevated standards.


Persons intending to enter the University, and desiring to arrange beforehand in regard to course of study, board and room, will address "The University, Ada, Ohio."

On arrival the newcomer is expected to report at once at the University office, to receive needed information regarding lodging places and boarding houses, obtain a card of matriculation and arrange his work. After matriculation, on payment of the tuition fee, he is given a "classification card" which, when presented to the instructor in charge of any class, admits him to that class, provided he has finished the prerequisite subjects.

Monday is Registration Day for new students, Tuesday for former students. All students, former and new, will report to their instructors on Tuesday and be ready for Wednesday's recitations and lectures.

To insure prompt attention, requests for credits, certificates of graduation, class standing, recommendations, et cetera, should be accompanied by a stamped self-addressed envelope.

Each student is entitled to one copy of his credits; 50 cents will be charged for each additional copy.

 N. B. For catalogues and other information address

THE UNIVERSITY, ADA, O.

COLLEGE OF LIBERAL ARTS

FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

HENRY WHITWORTH, A. B.,
Dean.
Latin.

MRS. EVA MAGLOTT, A. M.,
Mathematics.

RICHARD HOLMES SCHOONOVER, A. M., B. D.,
Greek, Hebrew, Biblical History.

WILLIAM GROTH, A. B.,
French, German, Spanish.

CHILDE HAROLD FREEMAN, B. S.,
Rhetoric, English Literature.

WILLIAM HENRY TRAINUM, A. M., B. D.,
Psychology, Ethics, Philosophy.

FRANK LEWIS BERGER, A. B.,
Physics.

LENIX CRAIG SLEESMAN, PHARM. G., PHARM. C.,
Chemistry.

LAWRENCE LEROY LOUTHIAN, PH. B., A. M.,
History and Civics.

HARVEY EVERT HUBER, A. M.,
Biology, Geology.

ANDREW SCOTT STAUFFER,
Assistant in Physiology.

GUY HORACE DEEMER,
Assistant in Chemistry.

ADMISSION

General Remarks

Applicants for admission to courses in the College of Liberal Arts, leading to a degree, must have, in addition to the pre-academic or grammar-school studies, four years of high school preparation, or a full equivalent, including all subjects specifically required for entrance upon the several courses offered. Applicants must complete the required preparatory work, if their certificates from other schools show that this work has not been finished. All preparatory work must be finished before Junior credentials are issued.

Those not desiring to take a full regular curriculum may at any time enter any department and pursue the studies they choose, if, on consultation, the head of the department is satisfied that they have sufficient preparation to pursue the work successfully. Such applicants are classified as "Special Students." Should they later desire to graduate, they may do so, on condition of passing all the requirements, including the preparatory work.

Credits in the entrance subjects are accepted from "first-class" High Schools, Academies, or Preparatory Schools. No certificates for private work are accepted, and the Entrance Committee reserves the right to reject any or all grades from a second or third class High School.

The applicant must present credentials duly made out and signed by the proper official of the school from which he comes, and showing in detail (1) the text book used in each subject, (2) the amount completed, (3) the number of weeks spent thereon, (4) the length in minutes of the recitation period, and (5) the mark or grade secured. Blanks for this purpose may be had by addressing "The University" and inclosing a self-addressed stamped envelope.

The applicant must see that the certificate is correct before presenting it, for credits not on the certificates will not be considered.

Scope of Preparatory Subjects

The Ohio Northern University recognizes the trend of opinion regarding a modification of the old-time high school curriculum,

and is disposed to weigh credits in all work done in completing a "well-planned high school course," reserving, however, the right to accept or reject any subject.

The following are the conventional entrance subjects, but all are not required of any one candidate.

English

I. Composition. Ability to write good English with clearness and mechanical accuracy. This ability can be acquired only by abundant practice in the description, narration, argumentation an exposition, under criticism by the teacher and with revision by the pupil.

II. Rhetoric. Formal instruction in the principles of rhetoric most likely to be of service in the practice of writing. The equivalent of Herrick and Damon's, Hart's, Scott and Denny's, or Lockwood and Emerson's elementary composition and rhetoric.

III. English Classics for 1915-1919. (A) A thorough study resulting in the knowledge of the subject matter, form and structure of one unit of each of the following groups:

Group I. Drama. Shakespeare's Julius Caesar, Macbeth, and Hamlet.

Group II. Poetry. Milton's L'Allegro. Il Penseroso, and either Comus or Lycidas; Tennyson's The Coming of Arthur, The Holy Grail, and The Passing of Arthur; The selections from Wordsworth, Keats, and Shelly in Palgrave's Golden Treasury, First Series, Book IV.

Group III. Oratory. Burke's Speech on Conciliation with America; Macaulay's Speech on Copyright and Lincoln's Speech at Cooper Union; Washington's Farewell Address and Webster's First Bunker Hill Oration.

Group IV. Essays. Carlyle's Essay on Burns, with a selection from Burns' Poems; Macaulay's Life of Johnson; Emerson's Essay on Manners.

(B) For general reading and composition work, ten units selected from the following groups; two from each group:

Group I. Classics in Translation. The Old Testament, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther; the Odyssey, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII; the Iliad, with the omission, if desired, of Books XI, XIII, XIV, XV, XVII, XXI; Virgil's Æneid. The Odyssey, Iliad, and Æneid should be read in English translations of recognized literary excellence.

For any unit of this group a unit from any other group may be substituted.

Group II. Shakespeare. Merchant of Venice; Midsummer Night's Dream; As You Like It; Twelfth Night; Henry the Fifth; Julius Caesar.

Group III. Prose Fiction. Defoe's Robinson Crusoe, Part I.; Goldsmith's Vicar of Wakefield; either Scott's Ivanhoe, or Scott's Quentin Durward; Hawthorne's House of Seven Gables; either Dicken's David Copperfield, or Dicken's Tale of Two Cities; Thackeray's Henry Esmond; Mrs. Gaskell's Cranford; George Eliot's Silas Marner; Stevenson's Treasure Island.

Group IV. Essays, Biography, Etc. Bunyan's Pilgrim's Progress, Part I.; The Sir Roger de Coverley Papers in the Spectator; Franklin's Autobiography (condensed); Irving's Sketch Book, Macaulay's Essays on Lord Clive and Warren Hastings; Thackeray's English Humorists; Selections from Lincoln, including at least the two Inaugurals, the Speeches in Independence Hall and at Gettysburg, the Last Public Address, and Letter to Horace Greeley, along with a brief memoir or estimate; Parkman's Oregon Trail; either Thoreau's Walden, or Huxley's Autobiography and selections from Lay Sermons, including the addresses on Improving Natural Knowledge, A Liberal Education, and A Piece of Chalk; Stevenson's Inland Voyage and Travels with a Donkey.

Group V. Poetry. Palgrave's Golden Treasury (First Series), Books II., and III., with especial attention to Dryden, Collins, Gray, Cowper, and Burns; Gray's Elegy in a Country Churchyard and Goldsmith's Deserted Village; Coleridge's Ancient Mariner and Lowell's Vision of Sir Launfal; Scott's Lady of the Lake; Byron's Childe Harold, Canto IV., and Prisoner of Chillon; Palgrave's Golden Treasury (First Series) Book IV., with especial attention to Wordsworth, Keats, and Shelley; Poe's Raven, Longfellow's Courtship of Miles Standish, and Whittier's Snow Bound; Macaulay's Lays of Ancient Rome and Arnold's Sohrab and Rustum; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Browning's Cavalier Tunes, Lost Leader, How They Brought the Good News, Home Thoughts from Abroad, Home Thoughts from the Sea, Incident of the French Camp, Herve Riel, Pheldippides, My Last Duchess, Up at a Villa, Down in the City, The Italian in England, The Patriot, "De Gustibus—," The Pied Piper, Instans Tyrannus; and The Forsaken Merman; Selections from American Poetry, with special attention to Poe, Lowell, Longfellow, and Whittier.

Mathematics

- I. Algebra, through Quadratic Equations, including Radical Quantities and Simultaneous Quadratics, Binomial Theorem and Progressions.
- II. Plane Geometry.
- III. Solid Geometry.
- IV. Trigonometry.
- V. Advanced Arithmetic.
- VI. Advanced Algebra.

Science

- I. Physical Geography.
- II. Botany.
- III. Physics.
- IV. Chemistry.
- V. Astronomy.
- VI. Geology.
- VII. Zoology.

History

- I. Ancient History.
- II. General History.
- III. Modern History.
- IV. English History.
- V. United States History.
- VI. Civil Government.
- VII. Economics.

Latin

- I. First Year Latin.
- II. Caesar's Gallic War, Books I.-IV.
- III. Virgil's *Aeneid*, Books I.-VI.
- IV. Cicero, six orations, including Archias and Manilian Law.
- V. Composition: translation of connected English passages into Latin Prose.

Greek

- I. First Year Greek.
- II. Xenophon's *Anabasis*, four books.
- III. Homer's *Iliad*, three books; or *Odyssey*, four books.
- IV. Composition: translation into Greek of English passages based on Xenophon.

German

- I. Grammar; ability to translate a connected passage of English prose into idiomatic German; translation into good English of such works as Hauff's *Das Kalte Herz*, Storm's *Immensee*, Von Hillern's *Hoher als die Kirche*.
- II. Translation of such works as Bernhardt's *Novellen Bibliothek*, Schiller's *Wilhelm Tell*, Lessing's *Minna Von Barnhelm*.

French

- I. Grammar; ability to render connected English passages into French; ability to translate into idiomatic English such works as Halevy's *L'Abbe Constantine*, Dumas' *La Tulipe Noire*, Enault's *Le Chien du Capitaine*.
- II. Translation of such works as George Sand's *La Petite Fadette*, Fenillet's *Le Roman d'un Jeune Homme Pauvre*, Sandeau's *Mlle. de la Selgliere*.

Entrance Requirements

A unit is the amount of work done in a "first-class" high school in reciting previously prepared work once a day, five days a week, throughout a year of thirty-six weeks. Its time equivalent is 120 clock-hours. Subjects pursued for a less time are given a proportionate value. At least fifteen such units are required for admission to collegiate rank.

1. For Admission to A. B. Courses

Candidates for admission to the courses leading to the degree of Bachelor of Arts must present of the list under "Scope of Preparatory Subjects:"

Latin I., II., III., IV., V	4 units
English I., II., III.....	3 units
Mathematics I., II.....	2½ units
History I., III., (or II.,) V., VI.....	2 units
Science III.....	1 unit
	<hr/> 12½ units

and of the following groups:

A—Greek I., II., and Science I., or II.	{ 2½ units
B—German I., II., and Science I., or II.	
C—French I., II., and Science I., or II.	
Total.....	15 units

2. For Admission to Courses Leading to B. S.

Candidates for admission to courses leading to the degree of Bachelor of Science must present:

English I., II., III.....	3 units
Mathematics I., II.....	2½ units
History I., III., (or II.,) V., VI.....	2 units
Science I., II., III.....	2 units
	<hr/> 9½ units

and one of the following groups:

A—Latin I., II.,	{ 2 units
B—German I., II.,	
C—French I., II.,	
Total.....	11½ units

and, in addition, any 3½ units taken from the following list: Zoology, Geology, Astronomy, Chemistry, English History, Economics, Solid Geometry, Plane Trigonometry, Advanced Arithmetic, Latin, Modern Languages.

In place of some of the subjects just named, other academic subjects of equivalent value may be presented.

Students taking a part, or all of the preparatory work here will follow the schedules set forth under "The Preparatory School."

Admission to Advanced Standing

Applicants from other colleges, seeking for advanced standing, must present (1) evidence of honorable dismissal, (2) a full record of the applicant's preparation for college, (3) a transcript of his college record, subject by subject, with the grade obtained in each and the hours credited. He should submit a catalogue of his college, bearing his name and of the issue current at the time of his admission to that college. Credit for advanced standing must be secured within the first and second quarters of the student's residence.

The committee on Admission reserves the right of rejecting subjects foreign to the college curriculum.

Collegiate Courses

The regular courses of instruction offered in the College of Liberal Arts are classified in the following departments:

Departments:

- | | |
|-------------------------|-----------------------|
| 1. Agriculture. | 10. Greek. |
| 2. Astronomy. | 11. History. |
| 3. Biblical Literature. | 12. Latin. |
| 4. Biological Science. | 13. Mathematics. |
| 5. Chemistry. | 14. Modern Languages. |
| 6. Christian Religion. | 15. Physics. |
| 7. Economics. | 16. Philosophy. |
| 8. English. | 17. Psychology. |
| 9. Geological Sciences. | 18. Social Sciences. |

Curriculums

From the courses offered in the departments named above, two three-year curriculums are arranged, consisting of prescribed and elective courses and leading to the degrees of A. B. and B. S.

These curriculums are arranged with regard to their general cultural value, which is the chief end of collegiate study leading to the bachelor degrees.

The credit value of a course is expressed in hours, an hour of credit being given for the satisfactory completion of work requiring one class exercise a week for one quarter. It is equivalent to two-thirds of a semester-hour.

As a condition of graduation, a student must complete 180 hours, this being the equivalent of fifteen class exercises a week for twelve quarters.

In making up his program of studies for any year, the student must give precedence to the prescribed courses and in the order in which they are designated in the curriculums.

Minimum, fifteen hours a week; maximum, twenty hours.

1. Leading to the Degree of Bachelor of Arts.

The distribution of hours among the several departments is as follows:

Biological Science	9	English Bible	10
Economic and Social Sciences	19	Latin	15
English	18	Other Foreign Languages	16
History	30	Mathematics and Astronomy	10
Philosophy and Psychology	20	Physical Sciences	12
Electives	21		

The subjects, distributed by years and terms as shown in the schedule following, are to be taken, as far as possible, in the order indicated.

FIRST YEAR		SECOND YEAR		THIRD YEAR	
Latin	3	Latin	3	Descriptive Astronomy	5
Biology I	3	Chemistry I	4	History of Philosophy I	3
Western Europe I	5	Psychology I	3	American History I	5
Greek, German or French	4	English Bible I	5	Sociology I	3
Latin	3	Latin	3	History of Philosophy II	3
Biology II	3	Chemistry II	4	American History II	5
Western Europe II	5	Psychology II	3	Sociology II	3
Greek, German or French	4	English Bible II	5	19th Century Essayists	3
College Rhetoric I	3	Chemistry III	4	American History	5
Human Physiology	3	Psychology III	3	Sociology III	3
Western Europe III	5	Shakespeare	3	Literary Criticism	3
Greek, German or French	4	Economics I	5	Elective	4
College Rhetoric II	3	19th Century Poetry	3	Elective	15
Latin	3	Economics II	5		
Plane Trigonometry	5	Ethics	5		
Greek, German or French	4	Elective	2		

2. Leading to the Degree of Bachelor of Science.

Distribution of hours among the several departments:

Biological Sciences	18	English Bible	10
Economic and Social Sciences	19	Foreign Languages	18
English	21	Mathematics and Astronomy	10
History	30	Physical Sciences	12
Philosophy and Psychology	20	Elective	24

The subjects, distributed by years and terms as shown in the schedule following, are to be taken, as far as possible, in the order indicated.

FIRST YEAR		SECOND YEAR		THIRD YEAR	
College Rhetoric I	3	Chemistry I	4	Descriptive Astronomy	5
Biology I	3	Psychology I	3	History of Philosophy I	3
Western Europe I	5	Zoology I or Botany I	3 or 4	American History I	5
German or French	4	English Bible I	5	Sociology I	3
College Rhetoric II	3	Chemistry II	4	History of Philosophy II	3
Biology II	3	Psychology II	3	American Hist. II	5
Western Europe II	5	Zoology II or Botany II	3 or 4	Sociology II	3
German or French	4	English Bible II	5	19th Century Essayists	3
Human Physiology	3	Chemistry III	4	American Hist. III	5
Western Europe III	5	Psychology III	3	Sociology III	3
Shakespeare	3	Zoology III or Botany III	3 or 4	Literary Criticism	3
German or French	4	Economics I	5	Elective	4
Plane Trigonometry	5	Economics II	5	Elective	15
Milton	3	19th Century Poetry	3		
German or French	4	Ethics	5		
Elective	3	Elective	2		

Partial Schedule of Electives

In addition to the courses herein offered, candidates for degrees are allowed to present credits from the College of Commerce, Law, Music, the School of Oratory or the College of Education as follows:

Commercial Science—Theory of Bookkeeping, 5 hours; Commercial Law, Stenography (with typewriting), each 5 hours.

Law—Commercial Paper, Contracts, Constitutional Law, Evidence, Domestic Relations, Equity, each 5 hours.

Music—Harmony, 6 hours; History of Music, 5; Theory of Music, 5.

Oratory—Oratory, 10 hours.

Education—History of Education, 9 hours; Principles of Education, 9.

Examinations

Mid-term examinations are held at the discretion of each professor. Final examinations are held on Wednesday and Thursday of the last week of each quarter, except in the Spring Quarter, when they fall on Thursday and Friday of the eleventh week. Hours: 7:00 and 9:00 a. m., 1:00 and 3:00 p. m. Classes having recited at the "odd" hours are examined the first day; those having recited at "even" hours, the second day.

The following is the system of grades:

A.....	90—100	D.....	conditioned.
B.....	80—90	F.....	failed.
C.....	70—80		

The letter D means that the grade has been withheld because the work of the course has not been fully completed.

F means that the student receives no credit whatever for the course.

Graduation

Diplomas are awarded at the Commencement exercises, which are held but once a year, at the close of the Spring Quarter. Those who have finished their work at the close of any previous quarter are expected, as far as possible, to be present, at the commencement exercises. Those whose work, beyond question, will be finished by the close of the Summer Quarter are entitled to all the privileges of the graduating class, but the diplomas are not issued until the requirements are fully met. In order to have a seat and part in the class organization, credentials must be obtained from the Committee on Standing and Graduation.

DESCRIPTION OF COURSES

Agriculture

PROFESSOR COTTERMAN

1. **Agriculture I.** A general course covering the important points in soils, soil fertility, farm crops and horticulture. This course is designed for those expecting to teach the subject, and consists of both laboratory and class room work. Credit, five hours.

Seat of Ohio Northern

Ada, the seat of the Ohio Northern University, is an attractive little city in North-western Ohio, on the Pittsburg, Fort Wayne & Chicago Branch of the Pennsylvania Railroad. It is midway between the intersection of the Cincinnati, Hamilton & Dayton; the Detroit, Toledo & Ironton, and the Lake Erie & Western Railways at Lima, and the Big Four at Forest. Connection is made with the Hocking Valley at Upper Sandusky, thirty miles east, and with the Ohio Central lines at Dunkirk, ten miles east.

Lying on the great watershed separating the waters tributary to the Ohio and the Mississippi from those flowing into the Great Lakes, Ada, with its population of three thousand, has an elevation above sea-level as high as any in the State, with healthful climate, sanitary conditions well guarded, and an abundant supply of excellent water from drilled wells. The town is unsurpassed in healthfulness and freedom from epidemics. Numberless forest trees line avenues and adorn premises, affording a delightful retreat during the warm summer months. The paved streets, hot and cold water plants, electric light and natural gas evidence the wide-awakeness of the citizens in the matter of public utilities and city improvements. Several years ago, by a vote under the "Beal Law," the saloons were banished, and Ada thrives under a "dry" regime. The people are especially kind and courteous to students, taking care to make their stay at the University pleasant and home-like.

Object

The Ohio Northern University welcomes to her privileges the worthy of all classes, but extends a special invitation to self-dependent young men and women eager to secure the benefits of a liberal education. Her leading aim is to furnish thorough practical instruction in all the departments at a minimum expense to the student. The entire regime has in view the creation and maintenance of an atmosphere inspirational and congenial to plucky young people of both sexes whose lot in life has taught them the worth of hard labor and close economy.

2. **Agriculture II.** A continuation and extension of the preceding course, dealing especially with the many phases of animal husbandry. Credit, five hours.

3. **Agriculture III.** A continuation and extension of Course II., covering the essential points of rural sociology and farm management, and laying special stress on methods of teaching agriculture. Credit, five hours.

Astronomy

MRS. MAGLOTT.

1. **Descriptive Astronomy.** A study of the fundamental facts of astronomy and of the methods of modern astronomical research. The text-book study is supplemented by lectures, lantern slides and photographs made at various observatories. The classes are required to spend from one to two hours a week in laboratory work, consisting of tracing on globes the path of the sun, of problems with the celestial globe, and star plotting of prepared maps. The treatment is non-mathematical, and the course is open to all students having had Preparatory Algebra I. and II. Credit five hours. First Quarter.

2. **Practical Astronomy.** This course is intended for students of astronomy and engineering, and those desiring to take a civil service examination for positions in U. S. Coast and Geodetic Survey.

It consists of theory and practical determinations of time, latitude, azimuth with the transit instrument and sextant. Open to all students having credit for Course 1. Credit four hours. Third Quarter.

Biblical Literature and the Christian Religion

1. **English Bible I.** A survey study of the history of the Hebrew people as presented in the Old Testament from the period of the conquest and establishment in Canaan to the Maccabean struggle and the close of the Old Testament history. The course embraces a preliminary sketch of the patriarchal period, with a more detailed study of the conquest, the period of the Judges, the united and the divided kingdoms, the exile, the revival of Judah and the beginnings of Judaism. Five hours.

—PROFESSOR TRAINUM.

2. **English Bible II.** Constructive studies in the Life of Jesus. The aim of the course is to enable students to construct their own "Life of Christ" in a true historical perspective. To this end the entire gospel history is studied in a connected way, especial attention being given to the most important political and social features of New Testament times and to the interpretation of critical passages. Five hours. —PROFESSOR TRAINUM.

3. **English Bible III.** Christianity in the Apostolic Age. This is a constructive study of Christianity from its inception to the close of the Apostolic Era. As far as possible the student is lead to construct his own story of the development of primitive Christianity. The study follows in the main the outline of the book of Acts, but the Epistles are also used in so far as they reflect conditions of life and thought during the period. Five hours. —PROFESSOR TRAINUM.

4—9. **Hebrew.** (4-6) Elementary Courses, followed by readings of the text, (7) Judges, (8) Psalms, (9) Prophetic writings. Five hours each. —PROFESSOR SCHOONOVER.

10—13. **New Testament Greek.** A critical reading of selections with a view to noting the special characteristics of this Greek, from (10) one of the Gospels, (11) Acts of the Apostles, (12) Epistle to the Romans, (13) Epistle to the Hebrews. Five hours each. —PROFESSOR SCHOONOVER.

14. **Evidences of Christianity.** A study of the grounds of Christian belief and an inquiry into the great essentials of the Christian faith, both in its biblical and philosophical aspects. Five hours. —PROFESSOR SCHOONOVER.

15. **History of Christianity.** A survey of the origin, growth, spread and influence of Christianity on the nations of the world. Five hours. —PROFESSOR SCHOONOVER.

Biological and Geological Sciences

PROFESSOR HUBER AND ASSISTANT.

The courses develop most naturally if the sequence is followed as indicated. Should the student find it necessary to depart from this sequence as outlined for Botany and Zoology, the instructor in charge must first be consulted in regard to proposed changes. Laboratory periods are two to three hours in length.

Two to three hours in laboratory count as one hour. A laboratory fee of two dollars is charged in all courses except where otherwise stated. The fee covers the use of compound microscope and accessories, reagents, materials and equipment.

1. General Biology of Plants. A course introductory to all biological studies and consisting of lectures and laboratory exercises illustrating the general principles of biology from the standpoint of plant life. Such topics are treated: Cell structure and physiology; food manufacture by green plants; methods of reproduction; economic and agricultural importance of bacteria, yeasts and fungi; disease and decay; evolution; heredity. Two hours lecture and recitation; three hours laboratory. Credit three hours.

2. General Biology of Animals. A continuation of course 2 and similar in purpose. Attention is given to the more important principles of biology as evidenced in the animal kingdom. Animal types are studied in laboratory. Two hours lecture and recitation; three hours laboratory. Credit three hours.

3. Physiology. With the two preceding courses in General Biology this forms a years work which is especially recommended to prospective teachers of biological science. This is a general course in human physiology, emphasizing the general functions of the body. Hygiene and sanitation are given some attention. Lectures and recitations with demonstrations and laboratory work. Prerequisite: General Biology of Animals. Credit three hours.

4. Zoology I. Lower Invertebrates. A lecture and laboratory course giving due attention to the comparative anatomy and life histories of the principal types. Economic importance, distribution and habits are considered. Prerequisite: General Biology of Animals. Credit three hours.

5. Zoology II. Higher Invertebrates. A continuation of Zoology I. Lecture and laboratory course given to the study of the development, anatomy and relationships of worms, arthropods, molluscs and echinoderms. Economic importance is emphasized. Prerequisite: Zoology I. Credit three hours.

6. Zoology III. Vertebrates. Lectures treating of the classification, development, structure, and relationships of vertebrates. Representative types are dissected in laboratory. Prerequisite: Zoology II. Credit three hours.

7. **Botany I. Thallophytes.** Lectures and laboratory exercises on some of the more important types of Algae and Fungi, emphasizing the morphology, development, reproduction and evolution of these groups. Prerequisite: General Biology of Plants. Two hours lecture and recitation; four hours laboratory. Credit four hours.

8. **Botany II. Bryophytes and Pteridophytes.** A continuation of Botany I. Lectures and laboratory exercises given to the study of typical liverworts, mosses, lycopods, equisetals and ferns. Two hours lecture and recitation; four hours laboratory. Credit four hours.

9. **Botany III. Spermatophytes.** A continuation of Botany II. Lectures, demonstrations and laboratory illustrating the morphology and phylogenetic relationships of gymnosperms and angiosperms. Two hours lecture and recitation; four hours laboratory and field work. Credit four hours.

10. **Ecology of Plants.** A systematic study of the local flora with special attention to the study of plants in relation to their environment. Illustrated lectures, laboratory and field. This course is offered only in Summer Quarter. Prerequisites: Botany I., II. and III. or equivalent, and Geology I. (Course omitted in 1914-1915). Credit four hours.

11. **Dendrology.** A laboratory and field course designed to acquaint the student with the trees and shrubs represented in the local flora, in both the winter and summer conditions. Lectures upon structure, classification, uses, and distribution. Schaffner's Field Manual of Trees is used as a key. Course must be given in Spring Quarter. Credit three hours.

12. **Histological Technique and Biological Methods.** A practical course for students who intend to do advanced work and for teachers of biology. Methods of collecting, killing, preserving and preparing material for demonstration and laboratory purposes are considered. Students will become familiar with the use of the microtomes and methods of hand sectioning; the principles and methods of imbedding, staining and mounting. Problems which are likely to be met in the biological laboratory of secondary schools are discussed. Persons desiring this course will notify the instructor several weeks in advance. Course limited to ten students. Laboratory fee to be fixed. Lecture and recitation two hours; laboratory six to eight hours. Prerequisites: Courses 3, 4, 5, 6, 7 and 8 or equivalent. Course given in Summer Quarter 1915. Credit three hours.

13. **Geology I. Dynamical and Structural.** A study of the earth's crust, dealing with rock form and structure, and the formation of mineral deposits and mountains, together with a study of the forces past and presents which have brought the earth to its present condition. Lecture, recitations and assigned readings, with laboratory work. Prerequisites: Chemistry and Physics. Credit three hours.

14. **Geology II. Historical.** A lecture and recitation course supplemented by rock collections, fossils and lantern slides. The sequence and distribution of rock strata and the succession of past geologic life, including a discussion of the theories of organic evolution and the evidences of evolution among plants and animals. Prerequisites: Courses 1, 2 and 10. Credit three hours.

Chemistry

PROFESSOR SLEESMAN AND ASSISTANT.

1. **General Inorganic Chemistry I. (Elementary).** This course is intended for students who have not had preparatory chemistry. Text: Bartley or McPherson and Henderson. Prerequisites: Preparatory Physics. Credit five hours.

2. **General Inorganic Chemistry II. (Non-metals).** This course offers a thorough study of the non-metallic elements and their several combinations. Text: Bartley or McPherson and Henderson. Prerequisites: General Chemistry I. and Preparatory Algebra I. Credit five hours.

3. **General Inorganic Chemistry III. (Metals).** This is a continuation of Course 2, taking up the metals and their compounds. Credit five hours.

4. **Qualitative Analysis I.** Text: Strieglitz. Prerequisites: General Chemistry I., II., III. Credit five hours.

5. **Qualitative Analysis II.** This course is a continuation of course 5. Credit five hours.

6. **General Organic Chemistry I.** A thorough study of the structure and constituents of the carbon compounds; the hydro-carbons and carbohydrates with their many addition and substitution products. Text, Bartley. Credit five hours.

7. **General Organic Chemistry II.** This is a continuation of Course 6. Credit 5 hours.

8. **Quantitative Analysis.** This work consists of volumetric and gravimetric analysis; the determination of acidity and alkalinity; the analysis of organic and inorganic salts, sugar, syrups, candies, baking powders, milk, urine, etc. A large amount of work is done which the food and drug act demands. Text, Muter. Credit five hours.

9. **Special Chemistry.** This includes the chemistry of the pharmaceutical drugs and their preparation; the analysis of ores, clays, cements, coal and coke, soil, limestone and many other compounds. Credit five hours.

Christian Religion

(See Biblical Literature).

Economics

(See The Social Sciences)

English

PROFESSOR FREEMAN.

8. **College Rhetoric I.** A thorough study of the paragraph, and of the principles of narration and description. The study of one novel and of one drama is required. Daily themes. Three hours. M. W. F.

9. **College Rhetoric II.** Exposition and argumentation. Practice in note taking, paragraphing, abstracting and brief making. One long expository theme and one argument are required. Three hours. M. W. F. (Scott and Denney's Paragraph-Writing, Scott and Zeitlin's College Readings in English Prose.)

10. **Argumentation.** A detailed study of the principles of argumentation. There is practice in brief making and debating. Two arguments are required. Prerequisite: Course 9. Two hours. T. Th. (Foster).

11. **The Short Story.** A study of the technique of the short story; reports on required readings, and practice in story writing. Two hours. T. Th.

12. **Survey of English Literature.** The purpose of this course is: (1) to acquaint the student with the leading works of English literature; (2) to trace the development of English literature; (3) to prepare the student for an intensive study of the great English writers. Two quarters (a) Poetry; (b) Prose. Three hours. M. W. F. (Crawshaw, Manly).

13. **Poetries.** This course includes: (1) a study of the forms of poetry—the epic, the lyric, the drama, and their subdivisions; (2) the structure of poetry, including the stanza, the verse, accent, tone color, quantity, pauses, alliteration, assonance, and rime; (3) a study of blank verse, the rimed couplet, the sonnet, and the triolet, the rondeau, the rondel, and the ballade. Prerequisite: Course 12. Three hours. M. W. F. (Matthews, Eastman).

14. **Shakespeare.** This course is intended (1) to trace Shakespeare's part in the development of the Elizabethan drama; (2) by reading a series of plays in chronological order to show Shakespeare's development, as a dramatist, as a poet, and as an interpreter of human life. Some attention is paid to the technique of the drama as understood by Shakespeare. Prerequisite: Course 12. Three hours. M. W. F. (Hudson).

15. **Milton.** The poetry of Milton is read and studied; also the Essay on Education and the Arcopigitica. Prerequisite: Course 12. Three hours. M. W. F.

16. **Nineteenth Century Poetry.** Special study of Browning and Tennyson. Rapid consideration will be given to Arnold, Morris, Swinburne and Rosetta. Prerequisite: Course 12. Three hours. M. W. F. (Bronson).

17. **Nineteenth Century Essayists** including Carlyle, Emerson, Arnold, Newman, Pater, Macaulay and Stevenson. Prerequisite: Course 12. Three hours. M. W. F.

18. **Prose Fiction.** The development of the novel and its place in literature. Some consideration is given to the short story. Five novels are read and criticised. Prerequisite: Course 12. Three hours. M. W. F. (Perry).

19. **Literary Criticism.** A study of the principles of literary criticism as applied to the various forms of literary expression. Prerequisite: Courses 12 and 13. Three hours. M. W. F. (Winchester).

Geological Sciences

(See Biological Science).

Greek

PROFESSOR SCHOONOVER.

I. Preparatory Courses.

1. The First Greek Book (White).....5 hours, 3 quarters.
2. Xenophon, Anabasis, prose composition...5 hours, 2 quarters.

II. Advanced Courses.

1. Epic Poetry.....Homer, Iliad.....5 hours, 2 quarters.
Odyssey.....5 hours, 1 quarter.
2. Lyric Poetry.....Selections from the Lyric
Poets.....5 hours, 1 quarter.
3. Drama.....Aeschylus, Prometheus
Bound.....5 hours, 1 quarter.
Sophocles, Antigone.....5 hours, 1 quarter.
Euripides, Medea.....5 hours, 1 quarter.
4. History.....Herodotus, Selections.....5 hours, 1 quarter.
Thucydides, Selections.....5 hours, 1 quarter.
Xenophon, Hellenica.....5 hours, 1 quarter.
5. Philosophy.....Plato, Apology and Crito.....5 hours, 1 quarter.
Phaedo.....5 hours, 1 quarter.
Aristotle, Ethics.....5 hours, 1 quarter.
2. Oratory.....Demosthenes, DeCorona.....5 hours, 1 quarter.
Lysias, Orations.....5 hours, 1 quarter.
Isocrates, Panegyricus.....5 hours, 1 quarter.
7. Sacred Greek.....New Testament, one of the
Gospels.....5 hours, 1 quarter.
Eusebius, Ecclesiastical
History.....5 hours, 1 quarter.

Each of the advanced courses will be accompanied by a literary study of the period.

History

PROFESSOR LOUTHIAN.

1. Western Europe I. The Mediaeval Period. 376-1300. For Freshmen. Five hours. Summer and Fall of 1915.
2. Western Europe II. The later Mediaeval and early Modern Period. 1300-1715. For Freshmen. Five hours. Winter of 1915-16 and Summer of 1916.
3. Western Europe III. The later Modern Period. 1715-1900. For Freshman. Five hours. Spring of 1916 and Summer of 1917.
4. English History I. A study of the constitutional and political history of England from the earliest times to 1297. Five hours. Fall and Summer of 1915.

5. **English History II.** Continuation of work begun in Course 4. 1297-1689. Five hours. Winter of 1915-16 and Summer of 1916.

6. **English History III.** Completion of work begun in Courses 4 and 5. From 1689 to the present time. Five hours. Spring of 1916 and Summer of 1917.

7. **American History I.** 1492-1750. Recommended for seniors and those who have had Courses 1-6, inclusive. Five hours. Fall and Summer of 1915.

8. **American History II.** 1750-1829. Continuation of work begun in Course 7. Five hours. Winter of 1915-16 and Summer of 1916.

9. **American History III.** 1829-1915. Completion of work begun in Courses 7 and 8. Five hours. Spring of 1916 and Summer of 1917.

Latin

PROFESSOR WHITWORTH.

It is the aim of this department to utilize as fully as possible the efficiency of Latin as an instrument of education and a means of culture. The student's effort is directed, not only to a mastery of the structure and mechanism of the language, and to a faithful rendering into idiomatic English, but also to an appreciation of Roman writings as exhibiting the genius of the age in which they were written, and to a proper estimate of Rome's place and part in the realm of literature. Attention is given to the history of the people, the biographies of the great men, their manners and customs, home life, religion and worship.

The college courses are to be selected with the advice and approval of the head of the department. Necessary class-adjustments partly determine the order in which these courses are pursued.

5. Cicero's *De Senectute* and *De Amicitia*.
6. Ovid—Selections from the *Metamorphoses*.
7. Livy—Book I, or selections from Books XXI. and XXII.
8. Horace—Selections from the *Odes* and *Epodes*. Latin versification.
9. Terence and Plautus—Selected plays of each.
10. Tacitus—*Agricola* and *Germania*.
11. Catullus, Tibullus and Propertius—Selections.
12. Pliny—Selected Letters.

13. Cicero—De Officiis or De Oratore.
14. Quintillian—Institutes, Book X.
15. Juvenal or Persius—Satires.
16. Lucretius—De Rerum Natura.
17. Cicero—De Natura Deorum or Tusculan Disputations.
18. Seneca's tragedies, Hercules and Medea.
19. Advanced Prose Composition.

Mathematics and Astronomy

PROFESSORS EVA MAGLOTT, MCEACHRON, THURSTON

The courses in Mathematics are designed to meet the needs of students desiring to teach mathematics in high school or college; to do graduate work in the best universities; to pursue engineering or other technical courses.

7. **College Algebra I.** Special stress is laid on factoring, radical quantities, fractional exponents, the solution of simple equation of one, two or more unknown quantities and the quadratic of one unknown. Four hours.

8. **College Algebra II.** The large part of this course is a study of the quadratic equation, followed by the surds, the imaginaries, the binomial theorem and arithmetical, geometrical and harmonic series. Four hours.

9. **College Algebra III.** An exposition of the theory of logarithms: Permutations, combinations, choice and chance, determinants, theory of equations. Elective in Liberal Arts curriculums. Four hours.

10. **Trigonometry I. Plane.** This course includes the theory of the trigonometric functions and their application to the solution of right and oblique triangles; the use of tables; the solution of a large number of practical problems. Five hours.

11. **Trigonometry II.** This course is designed for those who expect to make mathematics their major study and for the students in engineering. It gives attention to the solution of trigonometric identities, the solution of trigonometric equations and the theory and solutions of spherical triangles. Two and one-half hours.

12. **Analytical Geometry I.** The properties of the straight line, the graph of an equation, the discussion of the circle and the parabola. Four hours.

13. **Analytical Geometry II.** The ellipse, the hyperbola, the general discussion of the conic and the higher plane curves and solid analytical geometry. Four hours.

Uniqueness

The school year consists of forty-eight weeks, divided into four terms, designated, respectively, Fall, Winter, Spring and Summer Quarters. Instead of measuring time and work by Freshman, Sophomore, Junior and Senior years, credit is based on number of hours of class work done in each required or elected subject.

Students enter at any time (except in the College of Pharmacy), find their places where certificates or examination credits rank them, pursue studies as many terms as their plans and means allow, and are duly credited on the records with the work done. On satisfactorily completing the required number of hours in the selected curriculum they receive the appropriate degree.

Jeans and broadcloth have equal chance. The atmosphere is thoroughly democratic, a leading characteristic being the marked sociability of the students, a majority of whom are young people relying mainly on their own pluck and push.

Degrees

The University is empowered to grant the customary scholastic degrees and aims to bestow them on the deserving only. The applicant for a degree, coming from another college or university, is required to spend at least forty weeks in residence. No diploma is granted on grades made wholly in other institutions.

Time and Money Advantage

A school year at the Ohio Northern is forty-eight weeks in length. A three-year curriculum leading to the Bachelor's degree means 144 weeks of at least fifteen hours of recitations a week. This is the same time that is required elsewhere in four-year curriculums based on thirty-six weeks a year with a minimum of fifteen hours a week.

An Alumnus has figured that by completing a course in the Ohio Northern University, a student gains one year in time and one thousand dollars in money.

14. **Calculus I.** Differential Calculus. Differentiation of function; application of the derivatives; maxima and minima of functions. Elective in the Liberal Arts curriculums. Four hours.

15. **Calculus II.** Curve tracing; infinite series; integration of easy forms. Elective in the Liberal Arts curriculums. Four hours.

16. **Calculus III.** Integral calculus. Indefinite integration, the application of integral calculus to the solution of practical problems. Elective in the Liberal Arts curriculums. Four hours.

17. **Differential Equations.** Ordinary and partial and differential equations. Open to all students who have passed in Calculus III. Five hours.

18. **Theory of Probability and Method of Least Squares.** This course consists partly of lectures and partly of recitations in which the fundamental principles that govern the method of adjustment of observations and numerous problems are solved, illustrating the process of adjustment, of computing the most probable values of the quantities, of determining the precision of compound results, and of the use of the empirical equation. Five hours.

Modern Languages

PROFESSOR GROTH AND ASSISTANT.

1. **German I.** Pronunciation, elements of grammar, easy reading, practice in speaking and writing German. Reading: *Maerchen and Erschlungen* (H. A. Guerber).

2. **German II.** Continuation of Course I. Reading: *Andersen's Fairy Tales, Der Zerbrochene Krug* (Zschokke).

3. **German III.** Drill in Grammar, German conversation. Reading: *Germelshausen, Hoeher als die Kirche, Traumereien, Immensee*.

4. **German IV.** Continuation of Course III. Reading: *Schiller's Wilhelm Tell and Marie Stuart*. Conversation and composition.

5. **German V.** Reading and translation of masterpieces of representative German authors, study of syntax, prose composition.

6. **German VI.** Study of German classics, prose composition, conversational praxis.
7. **German VII.** Continued study of classics, lectures on German Literature, conversational praxis.
8. **German VIII.** History of German Literature.
9. **French I.** Pronunciation, grammar, reading, composition, and oral exercises. Reading of easy stories.
10. **French II.** Continuation of Course I. French reader.
11. **French III.** Grammar, oral exercises, composition, conversation. Reading: *La Mare au Diable* (Sand), *L'Abbe Constantin*.
12. **French IV.** Continuation of Course III. Grammar, idioms, reading of classics.
13. **French V.** Reading and translation of French masterpieces studies in syntax, conversational praxis.
14. **French VI.** Study of French classics, conversational praxis.
15. **French VII.** Continuation Course VI.
16. **Spanish I.** Elementary Spanish, easy reading.
17. **Spanish II.** Continuation of Course I. Grammar, composition, conversation. Reading: *Cuentos Modernos*.
18. **Spanish III.** Conversation, composition. Reading: *Flores de Espana*.
19. **Spanish IV.** Continuation of Course III. Grammar, composition, conversation, reading of best Spanish authors.
20. **Spanish V.** Reading and translation of Spanish classics, conversational praxis.
21. **Spanish VI.** Continuation of Course V.
22. **Spanish VII.** Continuation of Course VI.
23. **Italian.** Elementary Italian, especially for students in the College of Music. Pronunciation, translation and reading.

Philosophy

1. **Logie.** Elements from the text-book. Practical training in detecting the more common fallacies and in illustrating the condition of proof and laws of evidence. Five hours.

—PROFESSOR SCHOONOVER.

2—3. **Psychology I. and II.** These courses take up the general study of mental processes. They aim to train the student to observe the processes of his own experience and those of others, and to appreciate critically whatever he may read along psychological lines. It is introductory to all work in philosophy and pedagogy and is an important part of equipment for historical and literary interpretation. Three hours. Fall, Winter.

—PROFESSOR TRAINUM.

4. **Psychology III.** Psychology of Religion. This is a study of a special subject based on a thorough elementary course in psychology. Three main topics will be treated; (1) The beginnings of religion in the race. Special topics, primitive customs, ritual, taboo, sacrifice, prayer, myth, magic; (2) the beginnings of religion in the individual, involving a study in adolescence, the types of religious experience, such as conversion and gradual growth; revivalism in the light of the psychology of suggestion compared with the educational process; (3) analysis of mature religious consciousness with reference to the nature and place of religious emotion and the character and function of religious ideas and concepts. Three hours. Spring 1915.

—PROFESSOR TRAINUM.

5. **Psychology IV.** Social Psychology. Mind is treated from the standpoint of its organizing, communicating function in social groups. The basis of the theory of social consciousness is derived from recent studies in gesture, language and instinct. Questions proper to this science are; (1) the genesis and development of consciousness in the family, gang, school, club, voluntary association and nation; (2) the social character of instinct, feeling, perception and thinking; (3) the interpretation of the crowd, fashion and custom; (4) political parties, the newspaper and the public will; (5) democracy and leadership. Three hours. This course alternates with Psychology III.

—PROFESSOR TRAINUM.

6. **History of Philosophy I.** The course covers the history of European philosophy from the Ionian Greeks to the Renaissance. Three hours.

—PROFESSOR TRAINUM.

7. **History of Philosophy II.** This is a continuation of course 6 with special emphasis placed on the philosophical movements of the nineteenth century, including the theory of evolution. Three hours.

—PROFESSOR TRAINUM.

8-9. **Problems in Philosophy.** A study in metaphysics. This is a systematic study of the main problems of modern philosophy, such as materialism, idealism, mechanism and teleology, natural law, causation, the nature of the self and the place of the self in the universe. Prerequisites: Psychology and Ethics. Two quarters. Three hours each.

—PROFESSOR TRAINUM.

10. **Ethics.** The theory of morals. The course is a study; (1) of the nature of goodness, duty and freedom; (2) of the ethics of the family, society and the state. Five hours.

—PROFESSOR TRAINUM.

11. **General Psychology.** This is a survey course for beginners and a review for public school teachers. Five hours. Summer.

—PROFESSOR TRAINUM.

Physics

PROFESSOR BERGER AND ASSISTANT

Courses 4, 5 and 6 constitute a year's work in general physics. These courses are based on Millikan and Mills' "Mechanics, Molecular Physics and Heat," and Millikan's Electricity, "Sound and Light."

4. **Mechanics.** Three class periods and two laboratory periods a week. Credit five hours. Prerequisites: Preparatory Physics I., II., III., and Plane Trigonometry.

5. **Sound, Light and Heat.** Three class and two laboratory periods a week. Credit five hours. Prerequisite: Course 4.

6. **Electricity and Magnetism.** Three class and two laboratory periods a week. Credit five hours. Prerequisite: Course 4.

7. **General Physics.** A course covering the entire field of physics. Text, Crew's General Physics. Credit five hours. Prerequisites: Preparatory Physics I., II., III.

8. **The Teaching of Physics.** A course based on Mann's "The Teaching of Physics," intended for those expecting to teach high school physics. Credit five hours. Prerequisite: Course 7.

The Social Sciences

1-2. **Principles of Economics.** General introduction to the study of Political Economy. Courses 1 and 2 together are designed to give the student an acquaintance with the working

principles of modern economics. The general drill in the principles cannot be completed in one quarter and the department does not wish students to elect course 1 who do not intend to continue the work in course 2, as the field is only partially covered in course 1. Five hours each. Fall and Winter; repeated in Spring and Summer. —PROFESSOR TRAINUM.

3—4. **Sociology I., II.** A study of the phenomena of social life; the basis of society in nature; the social person; social institutions; social order and process. The course is designed to give an introduction to theoretical and practical sociology, and to systematize the reading, observation and thinking of the student. Three hours. Fall and Winter.

—PROFESSOR TRAINUM.

5. **Sociology III. Criminology.** A study in social pathology in which the principles laid down in Sociology I. and II. are applied and an effort made to find the cause and remedy for crime. Three hours. Spring 1915. —PROFESSOR TRAINUM.

6. **Sociology IV.** The social and economic phase of the temperance question, a study in social amelioration. Three hours. Spring 1916. Course IV. will alternate with course III.

—PROFESSOR TRAINUM.

EXPENSES

Matriculation

No matriculation, or entrance fee, is required to enter the University. Some schools advertise free tuition, but it will be found that entrance fees with them amount to more than tuition fees here, a fact not to be overlooked by those selecting a school thorough, yet less expensive.

Tuition Fee

For one quarter, (12 weeks), in advance.....	\$14.00
For two quarters, in advance.....	27.00
For three quarters, in advance.....	40.00
For four quarters, in advance.....	52.00

All students paying the regular tuition fee are admitted to the general classes in Rudimental Music without extra charge.

Tuition must be paid by Friday of the first week, otherwise one dollar additional will be charged.

A charge of one dollar is made for transferring a student from one course to another, unless the change is made at the opening of a term.

Laboratory Fees

Fees to cover breakage and cost of chemicals and other materials used in the laboratories are charged each term as follows: Chemistry, \$5.00; Physics, \$2.50; Biology, Botany and Zoology, each, \$2.00.

Special Examination Fee

A fee of \$2.50 is charged for giving a special examination in any subject not taken with the class.

Graduation Fees

Beautiful and neatly executed diplomas are awarded to those who complete any regular course of study. The diploma fee is \$5.00. Those preferring real parchment will be charged one dollar extra. Candidates for any degree are required to pay full tuition in graduation quarter.

Rooms and Boarding

Good board in private families, \$1.70 to \$2.75 a week.

Furnished rooms, two in a room, 60 cents to \$1.25 each a week.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

COLLEGE OF EDUCATION

FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

STURGISS BROWN DAVIS, A. M.,
Dean.
History and Principles of Education.

CARRIE ADEL WILSON, A. B.,
Training Teacher.
Methods.

ANNA MARIE VAUGHN,
Critic Teacher.
Primary Methods.
[Summer Quarter]

BERTINA PETTIS,
Critic Teacher.
Intermediate.
[Summer Quarter]

Supervisor Model School.
[Summer Quarter]

WILLIAM HENRY TRAINUM, A. M., B. D.,
Psychology and Philosophy.

LEAH ASCHAM, A. B.,
Training Teacher.
Mathematics.

RICHARD HOLMES SCHOONOVER, A. M.,
English Grammar and Analysis.
Methods of Teaching.

CHILDE HAROLD FREEMAN, B. S.,
English and American Literature.

HENRY WHITWORTH, A. B.,
Latin.

FRANK LEWIS BERGER, A. B.,
Physics.

HARVEY EVERT HUBER, A. M.,
Biology.

LENIX CRAIG SLEESMAN, PHARM. C.,
Chemistry.

HAROLD F. COTTERMAN, (O. S. U.),
Agriculture.

LAWRENCE LEROY LOUTHIAN, PH. B., A. M.,
History.

ROYAL DELANEY HUGHES, A. B.,
Public School Music.

EMMET ELIJAH LONG, B. C. S.,
Drawing.

Professional Training

The rationale of present school systems and the changed conceptions of the teacher's work make some special preparation for that work imperative. For the sake of the normal development of the children and the conservation of the teacher's health, professional training as well as sound scholarship are prerequisites demanded of those who would secure positions of responsibility and trust. Teachers of experience realize this quite keenly, and in many states public sentiment in this matter has crystalized into mandatory legislation.

The Eightieth General Assembly of Ohio passed special laws bearing on the professional training of teachers, and invested the State Superintendent of Public Instruction with authority to administer them. After January 1, 1915, all applicants for a license to teach in the public schools must have at least six weeks of professional training. This minimum amount is to be increased each year pro rata until 1920, when not less than one year of class room instruction in a recognized institution for the training of teachers will be required. A minimum scholastic attainment also was prescribed by the same legislature, and exemption from special examination is held out to those completing courses of training in recognized institutions.

Such legal enactments represent a growing public sentiment towards eliminating those who would use the teaching profession as a "stepping stone," and also those who are not awake to the teacher's opportunities for service. With increased scholarship and specific training will come a living wage and a just recognition of this branch of public service. While apparently the supply of teachers is plentiful, abundant opportunity is open to those of superior training.

The Ohio Northern University has always been interested in the training of teachers, and in turn has been liberally patronized by teachers of Ohio and adjoining States. In line with advanced legislation and the spirit of the times, the Department of Education has been enlarged and the facilities increased. The requirements of the Superintendent of Public Instruction have been more than met, and Ohio Northern is found on the "Accredited List" of recognized schools and colleges. Those who complete the Elementary and Secondary courses described in the following pages will be granted "provisional certificates" without further examination, and, after twenty-four months of successful teaching experience, the certificates may be made permanent by the State Board of Examiners.

Requirements for Admission

"Graduation from a first grade high school or its equivalent." Those not having had this opportunity may complete such work in this institution in the preparatory department. For a full description of the preparatory courses, see "The Preparatory School" elsewhere in this catalogue. Completion of either course is accepted as the equivalent of a first grade high school training.

COURSES OF STUDY

"Four Year" Schedule for the Training of High School Teachers

Degree: Bachelor of Science in Education

FIRST YEAR		SECOND YEAR		THIRD YEAR	
English	3	English	3	General Methods	3
Psychology	3	Sociology	3	Hist. of Education	3
Biology	3	Prin. of Education	3	Sch. Organization	2
*Elective	6	*Elective	6	Teach. or Elective	3
				*Elective	4 or 5
English	3	English	3	**Special Methods	3
Psychology	3	Sociology	3	Hist. of Education	3
Biology	3	Prin. of Education	3	Sch. Organization	2
Elective	6	Elective	6	Teach. or Elective	3
				Elective	4 or 5
English	3	English	3	**Special Methods	3
Psychology	3	Sociology	3	Hist. of Education	3
Biology	3	Prin. of Education	3	Sch. Organization	2
Elective	6	Elective	6	Teach. or Elective	3
				Elective	4 or 5
Drawing	3	Psychology	5	Ethics	5
Psychology	3	School Law	2	Bible	5
Observation	3	Observation	3	Elective	5
Elective	6	Elective	5		

*Electives must be selected with reference to the subjects or subjects which the student is preparing to teach. At least six quarters should be devoted to the major subject.

**See description of courses for explanation of required hours.

BOARD OF TRUSTEES

Elected by the Conference

Initus					Exitus
1914	MR. C. W. MOOTS, M. D.	-	-	-	Toledo, 1915
1905	REV. DAVID BOWERS, D. D.	-	-	-	Prospect, 1915
1910	MR. S. D. HAZLETT	-	-	-	Ada, 1915
1899	HON. S. A. HOSKINS, A. M.	-	-	-	Wapakoneta, 1916
1913	MR. JOSEPH H. EDWARDS,	-	-	-	Leipsic, 1916
1911	MR. GEORGE E. WHITNEY	-	-	-	Marysville, 1916
1898	REV. D. H. BAILEY, D. D.	-	-	-	Defiance, 1917
1907	MR. S. A. BOWMAN	-	-	-	Celina, 1917
1914	REV. MARCELLUS B. FULLER, D. D.	-	-	-	Lima, 1917
1913	REV. WM. A. WIAANT, D. D.	-	-	-	Springfield, 1918
1913	REV. JAS. R. COLLEY, D. D.	-	-	-	Cincinnati, 1918
1905	HON. J. H. CLARK	-	-	-	Marion, 1918
1914	MR. J. W. BOREN	-	-	-	Dayton, 1919
1914	REV. DANIEL MCGURK, D. D.	-	-	-	Dayton, 1919
1914	REV. CYRUS M. VAN PELT, D. D.	-	-	-	Madisonville, 1919

Elected by the Alumni

1910	REV. J. WESLEY HILL, D. D., LL.D., N. Y. City,	1915
1911	REV. WM. F. MCKEE, D. D., - Monongahela, Pa.,	1916
1912	MR. WALTER ELLIOTT	- - - - Ada, 1917
1913	SUPT. JOHN DAVISON	- - - - Lima, 1918
1914	REV. AARON S. WATKINS, LL.D.,	- - - - Ada, 1919

At Large, Elected by the Trustees

1911	HON. HENRY CLEWS, PH. D., LL.D., N. Y. City,	1916
1911	HON. JUDGE R. M. WANAMAKER	- Columbus, 1916

Officers

S. A. HOSKINS, President.

GEORGE E. WHITNEY, Secretary and Treasurer.

Two Year Schedule for the Training of Elementary School Teachers

Diploma: Graduate in Pedagogy

FIRST YEAR		SECOND YEAR	
Educational Psychology	2	Principles of Teaching	3
Geography and Methods	5	General Methods	2
Public School Music	5	History of Education	3
Drawing	3	School Organization	2
		Observation or Practice Teach.	3
		Elective	2
Educational Psychology	2	Principles of Teaching	3
Arithmetic and Methods	5	General Methods	2
Grammar and Methods	5	History of Education	3
Reading and Methods	3	School Organization	2
		Observation or Practice Teach.	3
		Elective	2
Educational Psychology	2	Principles of Teaching	3
History and Methods	5	General Methods	2
Agriculture and Methods	5	History of Education	3
Physical Education	3	School Organization	2
		Observation or Practice Teach.	3
		Elective	2

DESCRIPTION OF COURSES

Elementary Educational Psychology

NINE CREDIT HOURS. THREE QUARTERS.

This is an introductory course, open to all freshmen, and is designed to lay a foundation for all succeeding educational work. While the work of the three quarters is sequential and should be taken as outlined, it is offered in three units, any one of which may be taken separately if the student shall read the preceding texts and references. The courses are as follows: (a) An outline of Psychology, to acquaint the student with the laws and phenomena of mental life; (b) The Original Nature of man and how it may be used as the starting point in the educative process; (c) an outline study of Paidology, with emphasis on the meaning of infancy, adolescence and the exceptional child.

—PROFESSOR DAVIS.

School Organization

SIX CREDIT HOURS. THREE QUARTERS.

Elementary. The work of the three quarters will be based respectively upon: (a) Class room management; (b) recent school legislation in Ohio and school hygiene; (c) courses of study. Although the work is planned for three consecutive quarters, any one may be selected by special students prepared to take the work. T. Th.

—PROFESSOR WILSON.

Secondary. A continuous course in school administration, embracing: (a) Study of existing school systems and the various relation of the various agencies at work; comparative school legislation, with attention to Ohio; school management, financial problems, buildings and furnishings; (b) secondary education, with special study of courses of study, selection of teachers, reports, grading and records; (c) school sanitation and the Social Center Movement. T. Th.

—PROFESSOR DAVIS.

Methods of Teaching

General. (Elementary). A careful study of the value of method in the educative process. The inductive and deductive lesson plans, drills, examinations, questioning, memoriter vs. rational systems, how to study and kindred topics are discussed. The methods suitable to the different grades and how they should be modified are continually kept before students. Six credit hours.

—PROFESSOR WILSON.

General. (Secondary). A study of general methods with reference to secondary education, and as a preparation for Special Methods. The First Quarter only. Credit, three hours.

—PROFESSOR DAVIS.

Special. (Elementary). The various elementary branches listed in the "Two Year" schedule are taken up with a view to gaining advanced academic knowledge and an acquaintance with the more improved methods of teaching them. Selected texts in both subject matter and methods are made the basis in each branch. The courses are broadened by observation lessons in the public school, lectures and library references.

—PROFESSORS WILSON, SCHOONOVER, COTTERMAN AND DAVIS

Special. (Secondary). Three credit hours. An attempt will be made to group the students who are preparing to teach the same branches. The work will consist of a practical study of the methods used by the instructors in the preparatory department and the local high school, a wide range of reading, and lectures. Only one quarter required. The other quarter listed may be devoted to an elective. M. W. F. —PROFESSOR DAVIS.

Public School Drawing

Although this subject is required of students in the elementary course only, prospective high school teachers also are urged to elect it. To this branch of study belongs a culture peculiar to itself and the knowledge acquired is of very practical service to teachers of any grade. Special talent in this line is not a prerequisite, inasmuch as there are helpful rules and mechanical devices enabling one to attain a working efficiency in this branch. The class meets but one hour daily, yet on the successful completion of the prescribed readings, credit is given on a laboratory basis. —PROFESSOR LONG.

Public School Music

FIVE CREDIT HOURS. FALL QUARTER.

Most teachers are asked to conduct the work in their rooms, hence opportunity is given to prepare for such requirement. Concede that all are not gifted in music, yet, like drawing, the subject has an elementary side easily mastered by all. An exceptional opportunity is offered to gain this instruction without an extra fee. —PROFESSOR HUGHES.

History of Education

NINE CREDIT HOURS. THREE QUARTERS.

An outline study of the whole field, with special readings on particular periods such as Greek, Roman and Christian education; the contributions of Comenius, Rousseau, Herbart, Pestalozzi, and other modern educators. The work is based on Graves' "A History of Education," three volumes (Before the Middle Ages, During the Middle Ages, and In Modern Times), and Parker's "A History of Modern Elementary Education." Required of seniors in both courses in education, but the outside readings are adjusted to the special interests of both classes of students. Open to Liberal Arts students who have had psychology. M. W. F. —PROFESSOR DAVIS.

Principles of Education

NINE CREDIT HOURS. THREE QUARTERS.

Elementary. A study of the principles of teaching based on psychology. The work is centered about the recitation and school room practices. Interest and effort, form and content, perfection and crudeness of work, the ideal and practical, heredity and environment and kindred dualisms are carefully examined. M. W. F.

—PROFESSOR WILSON.

Secondary. The work is planned to meet the interests of prospective high school teachers and school principals. The principles of education founded upon psychology, biology and sociology are studied to find working bases. The dogmatical is not attempted, but a rational view point towards present educational problems is emphasized. Open to Liberal Arts students who have had psychology, and who elect history of education. M. W. F.

—PROFESSOR DAVIS.

Physical Education

THREE CREDIT HOURS.

Aside from a systematic acquaintance with the more approved forms of calisthenics, students are familiarized with plays and games of educational value by actual participation in them in the gymnasium and athletic field. A systematic reading course is prescribed, which is supplemented by class room lectures and practical work with children.

—PROFESSOR DAVIS.

The Observation of Teaching

Through the cooperation of the Ada public schools and the preparatory department of the University this work is easily accessible to all. Only a limited number, however, can be accommodated at one time, and special arrangement must be made as early as possible. It is advantageous to take the work daily, and attend a conference conducted by a training teacher. Credit is based upon attendance at the class, the weekly conference, and the nature of the reports. Three credit hours a quarter.

Practice Teaching

The cadet teachers train for the elementary work in the public schools. Those planning for secondary work teach in the preparatory department. As in Observation, only a limited number can be accommodated at once, and special arrangements must be made through the Dean. All work must be done by lesson plans under the immediate direction of the regular teacher in charge, and supervised by a training teacher. Credit is given to those only who show evidence of efficiency. The work is regarded as laboratory study, and only one hour a day will be recognized. Credit, three hours a quarter.

The Summer Quarter

The facilities at the Ohio Northern offer an unusual opportunity for the improvement of teachers already in the service. The courses in Liberal Arts are open to all who are prepared to take them along with the regular students in residence. In proportion to the demand, arrangements are made for additional instructors and special classes. Besides the academic instruction, classes will be formed in all the subjects prescribed by the State Department of Education for the professional training of teachers. Additional teachers have been employed, and classes will be divided into sections small enough to give each student opportunity to recite and ask questions. Here is an opportunity to get in line for a State life certificate. Arrangements have been made for two full courses in primary methods, including plays, games, and so forth.

A Model Rural School will be in session the first half of the summer quarter, to which especial attention will be given as a laboratory in working on rural school problems. For further particulars, send for the Summer School Bulletin.

Employment Bureau

This Bureau was organized to assist Ohio Northern students in securing teaching positions commensurate with their skill and scholastic attainments. In the past year many graduates and former students were brought into direct communication with school officers in search of superior teachers. A number of

superintendents and principals owe their present positions to direct calls to this bureau. The demand for teachers of science, agriculture, physical training and manual training was in excess of the properly qualified candidates.

School officers are most cordially invited to come to Ada and meet prospective teachers personally. The present senior class is composed of a number of exceptionally strong young men and women, and such a personal visit will repay any County or City Superintendent.

No charge is made for the services of this bureau, but only teachers of merit will be registered.

EXPENSES

Matriculation

No matriculation or entrance fee is required to enter the College of Education. Some schools advertise free tuition, but usually entrance fees with them amount to more than tuition fees here, a fact not to be overlooked by those selecting a school thorough, yet less expensive.

Tuition Fee

For one quarter (12 weeks) strictly in advance.....	\$14.00
For two quarters in advance.....	27.00
For three quarters in advance.....	40.00
For four quarters in advance.....	52.00
For less than a quarter, per week.....	1.50

All students paying the regular tuition-fee are admitted to the general class in Rudiments of Music without extra charge.

Tuition must be paid by Friday night of the first week, otherwise an additional dollar will be charged.

Graduation Fee

Beautiful and neatly executed diplomas are awarded to those who complete any regular course of study. In the Teachers' Courses the diploma fee is \$5.00. Those preferring real parchment are charged one dollar extra. Candidates for any degree are required to pay full tuition in graduation quarter.

Room and Board

Good board in private families cost \$1.70 to \$2.75 a week.

Furnished rooms, two in a room, 60 cents to \$1.25 a week.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

COLLEGE OF ENGINEERING FACULTY

ALBERT EDWIN SMITH, D. D., Ph. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

THOMAS JEFFERSON SMULL, ARCH., C. E.,
Dean.
Civil and Architectural Engineering.

ERNEST BERT THURSTON, M. E.,
Mechanical Engineering.

CHARLES ADDISON MILLER, C. E.,
Rail Road and Municipal Engineering.

KARL BOYER MACEACHRON, E. E.,
Electrical Engineering.

MRS. EVA MAGLOTT, A. M., C. E.,
Higher Mathematics.

LEAH ASCHAM, A. B.,
Mathematics.

LENIX CRAIG SLEESMAN, PHARM. C.,
Chemistry.

FRANK LEWIS BERGER, A. B.,
Physics.

HELEN LEY, B. F. A.,
Architectural Drawing.

HARVEY EVERT HUBER, A. M.,
Geology and Mineralogy.

W. FREDERICK THOMAS, C. E.,
Metallurgy.

WILLIAM GROTH, A. B.,
Modern Languages.

CHILDE HAROLD FREEMAN, B. S.,
English.

JAY PAUL TAGGART, LL. B.,
Contracts.

CARROLL RUSSELL ALDEN,
Assistant in Electrical Laboratory.

ALLEN HOWARD BARGAR,
Assistant in Mechanical Laboratory.

THOMAS WILLIAM REILLY,
Assistant in Testing Laboratory.

JOSEPH ADDIS GRAFT,
Assistant in Railroad Surveying.

FREDERICK HOWARD NIECE,
Assistant in Plane Surveying.

DWIGHT MOORE RYAN,
Mine Surveying.

JOSEPH HAMILTON HILL,
Assistant in Mathematics.

NEWTON A. WOODWORTH,
Machine Shop.

Aim

In organizing and maintaining this department, the Ohio Northern University provides a school where one may get an education in Engineering at the least possible expenditure of time and money. The curriculums of other technical schools require the student to devote about three-eighths of the time to the study of subjects having no direct bearing on Engineering. By omitting these subjects, the time is shortened to about two and a half years.

In thus reducing the length of the curriculum, an Engineering Degree is placed within the reach of thousands of worthy young men whose time and means will not permit them to spend the long period of four years in preparation for a vocation. The success of the experiment is seen in the fact that a very large per cent. of the graduates are engaged in occupations connected with Engineering.

The courses offered and the instruction given aim at laying a groundwork of sound theory and, at the same time, imparting such a knowledge of the usual professional practice as shall equip the student for efficiency in any position to which he may be called. The technical branches are taught by teachers of professional experience as well as of scientific training.

The value of the culture gained through the study of the "liberal arts and sciences" can not be overestimated, and to accommodate those desiring this culture in addition to the thorough technical training, the College of Liberal Arts with its excellent curriculums and many advantages is open to all Engineering students free of extra tuition.

Admission

Students presenting certified credits for the subjects required for entrance to the respective courses set forth in the following pages are permitted to register as candidates for the corresponding Engineering degrees. The prerequisites are specifically mentioned in "Description of Courses." Preparatory work may be taken here, separately, or in connection with advanced work.

A liberal policy is pursued in giving credit for work done in other colleges. Some credit is given for practical experience in draughting and field work acquired previous to matriculation, upon receipt of a satisfactory statement from the employer, stating the nature of the work and length of service. Statements must include postoffice address as well as signature of employer.

Time to Enter

The large number of classes formed each quarter makes it possible for one to enter at almost any time in the year and find the work he desires. The best time to enter, however, is at the beginning of the quarter. See Calendar.

In view of the fact that ever branch of study in the College of Engineering is presented from two to four times a year, students are given what they want, when they want it.

Options

With the advice and consent of the professor in charge, certain subjects may be elected in the various courses to take the place of such as may not appeal to the student in his chosen vocation. These are termed options and are mentioned in the schedules of the courses.

CIVIL ENGINEERING

The technical instruction includes drawing, surveying, railroad engineering, strength of materials, roofs, bridges, foundations, arches, retaining walls, dams, waterworks, river and harbor improvements, sewerage, drainage, hydraulics, water power and geodesy.

The teaching is done through class room exercises, field work, practical drawing and designing. Much time is devoted to the study of steel construction, during which the student is made familiar with the computation of stresses, designing, detailing and drawing of roofs, bridges and steel structures of all kinds. Those so desiring may elect advanced work in hydraulics and sewerage, instead of a portion of the structural work of this curriculum. The subject of roads and pavements, railroad construction and maintenance and masonry structures are exhaustively treated. Special attention is given to land, topographical stadia and city surveying and leveling. The end in view is to fit men to act as county and city engineers, surveyors, railroad engineers, bridge engineers, structural engineers, hydraulic engineers, and government geodetic engineers. Besides the undergraduate work, special and more elaborate study is arranged for those wishing to prepare for particular positions.

The College is well equipped with high-grade transits, levels, solar compasses, prismatic compasses, hand levels, aneroid barometers, stadia outfits, sight poles, level rods, chains, tapes, axes, pins, railroad curves, planimeters, protractors, stereotomy and descriptive geometry models, a collection of photographs and shop drawings of bridges and buildings, a well equipped laboratory, a large modern draughting room, equipped with individual lockers, a complete blue printing outfit and filing cases by which the student is familiarized with modern office methods, projectoscope and numerous engineering slides and an excellent scientific library. This equipment is constantly enlarging through purchase and donation and by construction of students of the College.

Committees

Agriculture: S. D. Hazlett, D. H. Bailey, S. A. Bowman, M. B. Fuller, J. W. Boren.

Buildings and Grounds: D. Bowers, S. A. Bowman, J. H. Clark, Walter Elliott, S. D. Hazlett, Wm. A. Wiant, A. S. Watkins, C. W. Moots.

Cabinet and Library: D. H. Bailey, Joseph H. Edwards, Walter Elliott, S. D. Hazlett, James R. Colley, M. B. Fuller, A. S. Watkins.

Degrees: S. A. Hoskins, James R. Colley, J. W. Hill, Daniel McGurk, J. W. Boren, George E. Whitney.

Executive: S. A. Bowman, J. W. Hill, Wm. A. Wiant, C. M. Van Pelt, A. E. Smith (ex-officio).

Finance: Joseph H. Edwards, Daniel McGurk, S. A. Bowman, S. D. Hazlett, C. M. Van Pelt.

Instruction: J. H. Clark, D. H. Bailey, D. Bowers, S. A. Hoskins, A. E. Smith (ex-officio), George E. Whitney.

Curriculum

FIRST QUARTER		SIXTH QUARTER	
	Hours		Hours
Algebra IV.....	4	Astronomy	4
Trigonometry I.....	5	Mechanical Mathematics I.....	5
Mechanical Drawing I.....	4	Stereotomy.....	4
Chemistry I	5	Highway Engineering.....	2½
Business English.....	2½	Rail Road Surveying.....	5
SECOND QUARTER		SEVENTH QUARTER	
Algebra V.....	4	Field Astronomy.....	2½
Trigonometry II.....	2½	Mechanical Mathematics II	5
Mechanical Drawing II.....	4	Stresses I.....	5
Chemistry II.....	5	Graphics I.....	4
Analytical Geometry I.....	4	R. R. Economics and Design.....	5
THIRD QUARTER		EIGHTH QUARTER	
Algebra VI.....	4	Stresses II	5
Calculus I.....	4	Graphics II.....	4
Mechanical Drawing III	4	Masonry.....	4
Analytical Geometry II.....	4	Electric Railways.....	2½
Physics VI.....	4	Sewerage	2½
FOURTH QUARTER		Least Squares.....	2½
Geology.....	3	NINTH QUARTER	
Calculus II.....	4	Bridge Design I.....	5
Descriptive Geometry I.....	4	Hydraulics I.....	5
Plane Surveying.....	5	Higher Structures.....	5
Physics IV.....	4	Reinforced Concrete.....	2½
FIFTH QUARTER		Geodesy	2½
Analytical Mechanics.....	5	Seminar.....	1
Calculus III	5	TENTH QUARTER	
Descriptive Geometry II.....	4	Bridge Design II.....	5
Field Engineering	5	Hydraulics II.....	5
Physics V.....	4	Building Construction.....	4
		Estimates and Contracts.....	2½
		Cement Testing.....	1
		Seminar.....	1
		THESIS	

Note—200 credit hours required for graduation.

Note—Two hours field work constitutes one credit hour.

Maximum number of hours per week—23.

Minimum number of hours per week—15.

OPTIONS.

Machine Design, 4; Metallurgy, 2½; Mineralogy, 2½; Mine Surveying, 2½; Electrical Machinery I., 5; Advanced English or Advanced German or other modern languages, 8.

ELECTRICAL ENGINEERING

The courses offered in this branch of Engineering embrace a thorough study of theoretical and applied electricity. The first half of the prescribed study is, in the main, the same as that in the Civil and Mechanical Engineering curriculums, including the fundamental engineering sciences, mathematics, drawing and surveying.

The last half consists of courses of study in stresses, graphics, strength of materials, hydraulics, steam engines, advanced study in the theory of electricity, a large amount of laboratory research and experiment, shop tests, plant testing, meter testing, machine drafting and designing, power plant and wiring layouts, and a thorough course in electrical machine construction.

The theoretical work is thoroughly supplemented with practical application in the laboratory and in the design of electrical machinery. Throughout the course the student is drilled in the solution of many numerical problems, with a view to a firm grasp of the theory.

In addition to an excellent Physical Laboratory, the department has a well-equipped Electrical Laboratory. A gas-engine-driven electric lighting system has been installed for lighting the University buildings and grounds. Both this plant and the plant of the Ada Water, Heat & Light Company are available for inspection and tests by students. In the laboratory, both direct and alternating currents are available for testing purposes. As part of the equipment may be mentioned the following: A general electric three phase generator arranged with two sets of windings so as to supply either three phase alternating current or direct current; a control board equipped with suitable switches and circuit breakers, meters, etc., a feeder board for supplying either three phase or single phase current to the testing leads; several transformers representing the types of transformers manufactured by almost all the well-known electrical manufacturing companies; a Westinghouse induction motor, so arranged as to be operated either single phase or polyphase, a Wagner induction motor, an Emerson induction motor, a Westinghouse D. C. generator; a two panel switch board equipped with meters, switches, circuit-breakers, etc., for controlling D. C. generator; ballastic galvanometers, static galvanometers, Wheatstone bridges, X-Ray apparatus, frequency meter, speed indicators, prony-brakes, rheostats, and about thirty-five voltmeters, ammeters representing nearly all the best-known makes of instruments. In addition to the above the department is supplied with a number of small motors, generators, testing keys, arc lamps,

Nernst lamps, lamp banks and auxiliary apparatus such as are to be found in any well-equipped laboratory. All the service meters of the local lighting company are repaired and calibrated in the University Electrical Laboratory, thus giving the student unexcelled opportunity for studying meter design and operation.

Curriculum

FIRST QUARTER		SIXTH QUARTER	
	Hours		Hours
Algebra IV.....	4	Electrical Machinery V.....	5
Trigonometry I.....	5	Electrical Machinery III.....	4
Mechanical Drawing I.....	4	Gas Engines.....	4
Chemistry I.....	5	Mechanics of Materials I.....	5
Business English.....	2½	Machine Drawing.....	4
SECOND QUARTER		SEVENTH QUARTER	
Algebra V.....	4	Electric Machinery VI.....	4
Trigonometry II.....	2½	Electric Machinery IV.....	4
Mechanical Drawing II.....	4	Mechanics of Materials II.....	5
Chemistry II.....	5	Machine Design I.....	4
Analytical Geometry I.....	4	Hydraulics I.....	5
THIRD QUARTER		EIGHTH QUARTER	
Algebra VI.....	4	Electric Machinery VII.....	5
Calculus I.....	4	Stresses I.....	5
Analytical Geometry II.....	4	Graphics I.....	4
Mechanical Drawing III.....	4	Machine Design II.....	4
Physics VI.....	4	Hydraulics II.....	5
FOURTH QUARTER		NINTH QUARTER	
Electrical Machinery I.....	5	Electric Machinery VIII.....	4
Calculus II.....	4	Electric Machinery IX.....	4
Descriptive Geometry I.....	4	Masonry.....	4
Plane Surveying.....	5	Electric Railways.....	2½
Physics IV.....	4	Seminar.....	1
FIFTH QUARTER		TENTH QUARTER	
Calculus III.....	5	Advanced Alternating Currents.....	5
Electrical Machinery II.....	4	Electrical Transmission.....	4
Analytical Mechanics.....	5	Illuminating Engineering.....	4
Descriptive Geometry II.....	4	Estimates and Contracts.....	2½
Physics V.....	4	Seminar.....	1

THESIS

OPTIONS

Descriptive Geometry, 4; Electric Meters 4; Storage Batteries, 4; Telephone Engineering, 4; Metallurgy, 2½; Railroad Engineering, 5; Gas Engines, 5; Adv. A. C. Lab. 2½; Differential Equations, 4; Adv. Eng. or Adv. German or other modern languages, 8.

Note—200 hours are required for graduation.

Note—Two hours laboratory work constitutes one credit hour.

Maximum number of hours per week—23.

Minimum number of hours per week—15.

MECHANICAL ENGINEERING

Mechanical Engineering deals with the transformation and transmission of energy, and with the theory and construction of mechanism and machinery. The courses offered are selected with a view to the theoretical and practical training that will enable the student to cope with the intricate and complicated problems arising in this phase of engineering. The first half of the curriculum consists of the basic engineering studies. In the latter half the usual mechanical engineering studies are pursued. Thorough training is given in machine drafting, machine designs, thermodynamics, steam engines, steam boilers, gas engines, electrical machinery and steam power plants.

The University has its own gas engine-driven lighting plant and a central steam heating plant, lighting and heating all the University buildings. This equipment is installed with special convenience for making tests on boilers, heating apparatus and power apparatus. In addition the central heating and lighting plant of the Ada Heating and Light Co., with its equipment of Corliss engines, high pressure cold and hot water pumps, boilers, et cetera, is open to the students for inspection and test.

Curriculum

FIRST QUARTER		FOURTH QUARTER	
	Hours		Hours
Algebra IV.....	4	Electrical Machinery I.....	5
Trigonometry I.....	5	Calculus II.....	4
Mechanical Drawing I.....	4	Descriptive Geometry I.....	4
Chemistry I.....	5	Plane Surveying.....	5
Business English.....	2½	Physics IV.....	4
SECOND QUARTER		FIFTH QUARTER	
Algebra V.....	4	Calculus III.....	5
Trigonometry II.....	2½	Electrical Machinery III.....	4
Mechanical Drawing II.....	4	Analytical Mechanics.....	5
Chemistry II.....	5	Descriptive Geometry II.....	4
Analytical Geometry I.....	4	Physics V.....	4
THIRD QUARTER		SIXTH QUARTER	
Algebra VI.....	4	Thermodynamics I.....	4
Calculus I.....	4	Mechanics of Materials I.....	5
Mechanical Drawing III.....	4	Machine Drawing.....	4
Analytical Geometry II.....	4	Métallurgy.....	2½
Physics VI.....	4	Masonry.....	4

SEVENTH QUARTER		NINTH QUARTER	
	Hours		Hours
Thermodynamics II	5	Steam Engine Design	4
Mechanics of Materials II.....	5	Mechanical Laboratory II.....	4
Machine Design I.....	4	Stresses II	5
Mechanical Laboratory I.....	4	Steam Turbines	1
Hydraulics I.....	5	Seminar	5
EIGHTH QUARTER		TENTH QUARTER	
Machine Design II.....	4	Steam Power Plants.....	4
Stresses I.....	5	Mill Buildings	4
Graphics I	4	Scientific Management	4
Hydraulics II.....	5	Estimates and Contracts	2½
Gas Engines.....	5	Seminar	1

THESIS

Note—200 hours are required for graduation.

Note—Two hours laboratory work constitutes one credit hour.

Maximum number of hours per week—23.

Minimum number of hours per week—15.

OPTIONS

Reinforced Concrete, 2½; Heating and Ventilation, 4; Gas Engine Design, 4; Steam Piping System, 4; Producer Gas and Gas Producer, 4; Advanced English, Advanced German or other modern languages, 8.

MUNICIPAL AND SANITARY ENGINEERING

This branch of Engineering is most nearly related to the parent stem, Civil Engineering. The instruction consists of the basic engineering sciences, and most of the general civil engineering subjects, special attention being paid to those branches which have to do with the public health. This calls for a better knowledge of chemistry, bacteriology and sanitation than can be obtained in the usual courses in Civil Engineering, and additional work is given in topographical surveying, water supply, sewer design, sewage disposal, roads and pavements and precise surveying. The increasing demand for this grade of engineers has made it one of the leading courses in all scientific schools.

To those pursuing this curriculum, the city improvements in progress in Ada together with an excellent cement testing laboratory afford opportunity to make practical observation and to assist in establishing street and sidewalk grades, cross-sectioning and computing earth work, laying out street and alley intersections, installing sewers and accessories, inspecting, drawing up specifications, advertisements and proposals, and letting out contracts.

Curriculum

FIRST QUARTER		SIXTH QUARTER	
	Hours		Hours
Algebra IV.	4	Water Analysis.....	2½
Trigonometry I	5	Mechanics of materials I.....	5
Mechanical Drawing I.....	4	Stereotomy.....	4
Chemistry I.....	5	Railroad Surveying.....	5
Business English.....	2½	Physics VI.....	4
SECOND QUARTER		SEVENTH QUARTER	
Algebra V.	4	Highway Engineering.....	2½
Trigonometry II.....	2½	Mechanics of Materials II.....	5
Mechanical Drawing II.....	4	Stresses I.....	5
Chemistry II.....	5	Graphics.....	4
Analytical Geometry I.....	4	R. R. Economics and Design.....	5
THIRD QUARTER		EIGHTH QUARTER	
Algebra VI.	4	Stresses II.....	5
Calculus I.	4	Graphics II.....	4
Mechanical Drawing III.....	4	Masonry.....	4
Analytical Geometry II.....	4	Electric Transmission.....	2½
Chemistry III.....	5	Sewerage Disposal.....	2½
FOURTH QUARTER		Sewerage Design.....	2½
Geology.....	3	NINTH QUARTER	
Calculus II.....	4	Water Supply.....	4
Descriptive Geometry I.....	4	Hydraulics I.....	5
Plane Surveying.....	5	Higher Structures.....	5
Physics IV.....	4	Reinforced Concrete.....	2½
FIFTH QUARTER		Irrigation.....	2½
Analytical Mechanics.....	5	Electric Railways.....	2½
Calculus III.....	5	Seminar.....	1
Descriptive Geometry II.....	4	TENTH QUARTER	
Municipal Engineering.....	5	Municipal Management.....	4
Physics V.....	4	Hydraulics II.....	5
		Building Construction.....	4
		Estimates and Contracts.....	2½
		Cement Testing.....	1
		Seminar.....	1
		THESIS	

Note—200 hours are required for graduation.

Note—Two hours laboratory work constitute one credit hour.

Maximum number of hours per week—23.

Minimum number of hours per week—15

MINING ENGINEERING

This curriculum includes most of the civil engineering subjects and an extended study of historical, dynamical and economical geology, mineralogy, metallurgy, hydraulics, and the assaying of gold, iron, silver and copper.

Curriculum

FIRST QUARTER		SIXTH QUARTER	
	Hours		Hours
Algebra IV.....	4	Geology II.....	4
Trigonometry I.....	5	Mechanics of Materials I.....	5
Mechanical Drawing I.....	4	Machine Drawing.....	4
Chemistry I.....	5	Mineralogy.....	2½
Business English.....	2½	Masonry.....	4
SECOND QUARTER		SEVENTH QUARTER	
Algebra V.....	4	Blowpipe Analysis.....	4
Trigonometry II.....	2½	Mechanics of Materials II.....	5
Mechanical Drawing II.....	4	Machine Design I.....	4
Chemistry II.....	5	General Metallurgy.....	2½
Analytical Geometry I.....	4	Hydraulics I.....	5
THIRD QUARTER		EIGHTH QUARTER	
Algebra VI.....	4	Machine Design II.....	4
Calculus I.....	4	Stresses I.....	5
Analytical Geometry II.....	4	Graphics I.....	4
Mechanical Drawing III.....	4	Hydraulics II.....	5
Physics VI.....	4	Electro Metallurgy.....	4
FOURTH QUARTER		NINTH QUARTER	
Electrical Machinery I.....	5	Mining Engineering I.....	4
Calculus II.....	4	Assaying.....	4
Descriptive Geometry I.....	4	Stresses II.....	5
Plane Surveying.....	5	Sewerage.....	2½
Physics IV.....	4	Electric Railways.....	2½
FIFTH QUARTER		Seminar.....	1
Calculus III.....	5	TENTH QUARTER	
Electrical Machinery III.....	4	Mining Engineering II.....	4
Analytical Mechanics.....	5	Mill Buildings.....	4
Descriptive Geometry II.....	4	Scientific Management.....	4
Physics V.....	4	Estimates and Contracts.....	2½
		Seminar.....	1
		THESIS	

Note—200 hours are required for graduation.

Note—Two hours laboratory work constitutes one credit hour.

Maximum number of hours per week—23.

Minimum number of hours per week—15.

ARCHITECTURE

The object of this curriculum is to unite a thorough knowledge of the mechanics of materials and engineering construction with a special training in architectural design and decorative art. Instruction is given in the basic engineering sciences, most of the general civil engineering subjects, and courses in architectural history, ornamentation, decorating, architectural designing, heating, ventilating, plumbing, estimates, fireproofing and superintendence.

Curriculum

FIRST QUARTER		SIXTH QUARTER	
	Hours		Hours
Algebra IV.....	4	Heating and Ventilating.....	4
Trigonometry I.....	5	Mechanics of Materials I.....	5
Mechanical Drawing I.....	4	Stereotomy.....	4
Chemistry I.....	5	Pen and Ink.....	2½
Business English.....	2½	Curves and Earth Work.....	5
SECOND QUARTER		SEVENTH QUARTER	
Algebra V.....	4	Building Laws.....	2½
Trigonometry II.....	2½	Mechanics or Materials II.....	5
Mechanical Drawing II.....	4	Stresses I.....	5
Chemistry II.....	4	Graphics I.....	4
Analytical Geometry.....	4	Arch Drawing I.....	4
THIRD QUARTER		EIGHTH QUARTER	
Algebra VI.....	4	Stresses II.....	5
Calculus I.....	4	Graphics II.....	4
Mechanical Drawing III.....	4	Masonry.....	4
Analytical Geometry II.....	4	Electric Railways.....	2½
Physics VI.....	4	Sewerage.....	2½
FOURTH QUARTER		Arch Drawing II.....	4
Geology.....	3	NINTH QUARTER	
Calculus II.....	4	Arch Design I.....	5
Descriptive Geometry I.....	4	Hydraulics I.....	5
Plane Surveying.....	5	Higher Structures.....	5
Physics IV.....	4	Reinforced Concrete.....	2½
FIFTH QUARTER		Landscape Design.....	2½
Analytical Mechanics.....	5	TENTH QUARTER	
Calculus III.....	4	Wiring and Piping.....	2½
Descriptive Geometry II.....	5	Arch Design II.....	5
Water Colors.....	2½	Building Construction.....	4
Physics V.....	4	Estimates and Contracts.....	2½
History of Architecture.....	2½	Seminar.....	1
		THESIS.....	

Note—200 hours are required for graduation.

Note—Two hours laboratory work constitutes one credit hour.

Maximum number of hours per week—23.

Minimum number of hours per week—15.

SCHEDULE OF CLASSES

HR.	INSTRUCTOR	FALL QUARTER	WINTER QUARTER	SPRING QUARTER	SUM. QUARTER
	Small	Estimates and Contracts		*Arch Draw. (M.W.F.) Reinforced Con. (T.Th.)	*Arch Design (M.W.F.) Irrigation (T.Th.)
7 A.M.	Thurston	Thermodynamics	Steam Engines	Thermodynamics	Producer Gas
	Miller	Mech. Draw. I (M.W.F.) Sewerage (T.Th.)	Mech. Draw. II (M.W.F.) Mech. Draw. I (T.Th.)	Mech. Draw. III (M.W.F.) Mech. Draw. III (T.Th.)	Mech. Drawing III.
	MacEachron	*Tel. Engineering	Elec. Machines VI	Elec. Circuits (T.Th.) Elec. Railways (M.W.F.)	*Storage Batteries
	Maglott				
	Berger	Physics V.	Physics VI.	Physics V	Physics VI
8:30	Small	Stresses I.	Stresses II.	Stresses I.	Stresses II.
	Thurston	Machine Drawing	Mch. Design I (M.T.W.T.) Seminar (F.)	Mch. Design II (M.T.W.T.) Seminar (F.)	*Steam Piping
	Miller	Mech. of Materials I.	Mech. of Materials II.	Mech. of Materials I.	Mech. of Materials II.
	MacEachron	Electric Machines IV.	Adv. Alt. Currents	*Electric Machines I.	*Electric Meters
	Maglott	Analytical Geom. I	Analytical Geom. II.	Analytical Geom. I.	Analytical Geom. II.
9:30	Berger				
	Small	Higher Structures	Cement Lab. (M.W.F.) Highway Eng. (T.Th.)	Higher Structures	
	Thurston	Machine Shop	Steam Turbines	*Steam Engine Design	*Gas Engine Design
	Miller	Descriptive Geom. I.	Descriptive Geom. II.	Descriptive Geom. I.	Descriptive Geom. II.
	MacEachron	Electric Machines V.	*Elec. Transmission		* Illum'g Engineering
	Maglott	Descriptive Astronomy	Calculus II.	Geodesy	Calculus III.
	Berger	Physics IV	*Metallurgy	Physics IV	

HR. :	INSTRUCT'R	FALL QUARTER	WINTER QUARTER	SPRING QUARTER	SUM. QUARTER
10:30	Small	Office	Office	Office	Office
	Thurston	Hydraulics I.	Hydraulics II.	Hydraulics I.	Hydraulics II.
	Miller		Masonry	Stereotomy	Masonry
	MacEachron	Electric Machines I.			*Electric Machines II.
	Maglott	Calculus I.	Analytic Mechanics	Calculus II.	Analytical Mechanics
	Berger				
1:00	Small	Graphics I.	Graphics II	Graphics I (M.T.W.Th) Seminar (F)	Graphics II.
	Thurston	*Scientific Managem't	Mechanical Lab. I.	Gas Engines	*Steam Power Plants
	Miller	College Algebra II.	College Algebra II.	College Algebra II.	College Algebra II.
	MacEachron	College Algebra I.	College Algebra I.	College Algebra I.	College Algebra I.
	Maglott	Calculus III.	Calculus I.	Calculus III.	College Algebra III.
	Berger				
2:00	Small	Bridge Design I.	Bridge Design II.	Bridge Design I.	Bridge Design II.
	Thurston	Heat'g and Ventilati'n	Hydraulic Lab.	Mechanical Lab. II.	*Steam Engines
	Miller	Rail Road I. (M.W.F.) Plane Survey'g (T.Th.)	Rail Road II. (M.W.F.) Field Eng. (T. Th.)	Rail Road I. (M.W.F.) Plane Survey'g (T.Th.)	Rail Road II. (M.W.F.) Field Eng. (T. Th.)
	MacEachron	*Elec. Machines III.	Elec. Machines VI.	Elec. Machines IX.	*Elec. Power Plants
	Maglott	Trigonometry I.	Trigonometry I.	Trigonometry I.	Trigonometry I.
	Berger				

FACULTY AND OFFICERS

HENRY SOLOMON LEHR, A. M., PH. D.,
President Emeritus.

ALBERT EDWIN SMITH, D. D., PH. D.,
President,
On the William W. Edwards Foundation.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.
Dean of College of Commerce.

ALFA HOLMES,
Registrar.

HENRY WHITWORTH, A. B.,
Dean of College of Liberal Arts.
Latin.

RICHARD HOLMES SCHOONOVER, A. M., B. D.,
Greek, Hebrew, Biblical History.

FRANK BARTLETTE WILLIS, A. M., LL. D.,
Civics, Economics, Law.
Governor of Ohio.
(Absent on leave.)

WILLIAM GROTH, A. B.,
Modern Foreign Languages.

LENIX CRAIG SLEESMAN, PHAR. G., PHAR., C.,
Chemistry.

CHILDE HAROLD FREEMAN, B. S.,
Principal of Preparatory School.
Rhetoric and English Literature.

FRANK LEWIS BERGER, A. B.,
Physics.

HARVEY EVERT HUBER, A. M.,
Biology, Geology.

LAWRENCE LEROY LOUTHIAN, PH. B., A. M.,
History, Civics.

HR.	INSTRUCTOR	FALL QUARTER	WINTER QUARTER	SPRING QUARTER	SUM. QUARTER
	Small	*Water Supply	Mill Bldg. (M. T. W. Th.) Seminar (F.)		*Mine Surveying
	Thurston			Mech. Lab. II.	
3:00	Miller	Plane Survey'g (T. Th.) Rail Road I. (M. W. F.)	Field Eng. (T. Th.) Rail Road I. (M. W. F.)	Plane Survey'g (T. Th.) Rail Road I. (M. W. F.)	Field Eng. (T. Th.) Rail Road II (M. W. F.)
	MacEachron	*Elec. Machines III.	Dynamo Machines II.	Elec. Machines IX. Elec. Machines III.	
	Maglott	*History of Arch.	Trig. II. (M. W. F.) Least Squares (T. Th.)	Field Astronomy	*Trigonometry II.
	Berger				
	Small				
	Thurston			Mech. Lab. II.	
4:00	Miller	Plane Survey'g (T. Th.) Rail Road I. (M. W. F.)	Field Eng. (T. Th.) Rail Road I. (M. W. F.)	Plane Survey'g (T. Th.) Rail Road I. (M. W. F.)	Field Eng. (T. Th.) Rail Road II (M. W. F.)
	MacEachron	*Elec. Machines III.		Elec. Machines IX. Elec. Machines III.	
	Maglott		College Algebra		
	Berger				

NOTE—Subjects marked * are subject to change, both as to hour and term.

M. W. F. denotes recitations held on Monday, Wednesday and Friday; T. Th., on Tuesday and Thursday.

DESCRIPTION OF COURSES

MATHEMATICS

1. Algebra IV.: Special stress is laid on factoring, radical quantities, fractional exponents, the solution of simple equations of one, two or more unknown quantities and the quadratic of one unknown. Text: Wells. Prerequisite: Alg. I., II. and III.
2. Algebra V.: The large part of this course is a study of the quadratic equation, followed by the surds, the imaginaries, the binomial theorem and arithmetical, geometrical and harmonic series. Text: Wells. Prerequisite: Alg. IV.
3. Algebra VI.: An exposition of the theory of logarithms; permutation combinations, choice and chance, determinants; theory of equations. Text: Wells. Prerequisite: Alg. V.
4. Trigonometry I.: Plane. This course includes the theory of the trigonometric functions and their application to the solution of right and oblique triangles; the use of tables; the solution of a large number of practical problems. Text: Granville. Prerequisite: Alg. III. or High School equivalent.
5. Trigonometry II.: Gives attention to the solution of trigonometric identities, the solution of trigonometric equations and the theory and solution of special triangles. Text: Granville. Prerequisite: Trig. I.
6. Analytical Geometry I.: The properties of the straight line, the circle, and the parabola. Text: Gale and Smith. Prerequisite: Trig. I.
7. Analytical Geometry II.: The ellipse, the hyperbola, the discussion of the higher plane curves and solid analytical geometry. Text: Gale and Smith. Prerequisite: Analytics I.
8. Calculus I.: Differential Calculus, differentiation of functions; applications of the derivatives; maxima and minima of functions. Text: Granville. Prerequisite: Analytics I.
9. Calculus II.: Infinite Series. Curvature of curves; evolutes and involutes; curve tracing; infinite series; integration. Text: Granville. Prerequisite: Calculus I.
10. Calculus III.: Integral Calculus. Indefinite integration, and the application of integral calculus to the solution of practical problems. Text: Granville. Prerequisite: Calculus II.
11. Differential Equations: Solution of problems of the first and second degree. Text: Johnson. Prerequisite: Calculus III.
12. Analytical Mechanics: In order to prepare for the more technical studies of Mechanics of Machinery and Applied Mechanics, a course in the principles of Mechanics is given. The text-book is supplemented with original problems so as to get the student into the habit of analyzing these problems and using his own methods of solution. Text: Maglott. Prerequisites: Calc. I.

PHYSICS AND CHEMISTRY

4. Physics IV.: (University Physics—Mechanics): Kinematics, kinetics elasticity, mechanics of fluids, lectures, class exercises and laboratory work. Prerequisites: Physics I., II., and III. and Calculus I.
5. Physics V.: (University Physics—Sound, Heat and Light): Nature and motion of sound, theory of music, nature and propagation of light, refraction, reflection, dispersion and polarization, nature of heat, temperature, expansion, fusion, kinetic theory of gases. Text: Carhart's University Physics. Prerequisites: Same as in Physics IV.
6. Physics VI.: (University Physics—Magnetism and Electricity):

Electrical charges, potential capacity, electrolysis, Ohm's law, electrodynamics, electromagnetism, electro-magnetic induction, electric oscillations. Lectures and class exercises. Text: Carhart's University Physics. Prerequisites: The same as in Physics IV.

7. Chemistry I.: This is a course in the non-metallic elements and their inorganic compounds. The class work consists of lectures, recitations and demonstrations. In individual laboratory work, each student thoroughly investigates every subject. Text: Smith. Prerequisite: Physics I., II., III., Algebra 1.

8. Chemistry II.: In this course the metallic elements, their compounds and chemical philosophy are theoretically and practically taught by lectures, recitations, demonstrations and much individual laboratory work by the student. Text: Smith. Prerequisite: Chemistry I.

DRAWING.

1. Freehand Drawing: Sketching and pencil work.
2. Lettering: Freehand engineering lettering.
3. Mechanical Drawing: Use of drawing instruments, cabinet and isometric projections, working drawings. Text: French's Engineering Drawing. Prerequisite: Freehand drawing, geometry, lettering.
4. Projections: Orthographic projections, intersections, shadows, elementary linear perspective. Text: French's Engineer Drawing. Prerequisite: Mechanical Drawing.
5. Perspective: Angular, parallel, vertical, curvilinear and perspective shades and shadows. Text: Ware's Modern Perspective. Prerequisite: Projections.
6. Descriptive Geometry I.: Advanced orthographic projection planes, single and double curved surfaces. Text: Church's Descriptive Geometry. Prerequisite: Projections.
7. Descriptive Geometry II.: Spherical projections, maps, shadows, perspectives. Text: Church's Descriptive Geometry. Prerequisite: Descriptive Geometry I.
8. Machine Drawing: Drafting room practice, conventions, detailing, assembly drawings, checking. Text: Reid's Machine Drawing and Elementary Machine Design. Prerequisite: Descriptive Geometry I.
9. Machine Design I.: (Kinematics of Machinery): Velocity diagrams, gears, cams, couplings, straight line and parallel motions. Text: Jones' Machine Design, Part I. Prerequisites: Machine Drawing, Mechanics I.
10. Machine Design II.: Form, strength, proportions, bearings, gears, shafts, couplings, fly-wheels, cylinders. Text: Jones' Machine Design, Part II. Prerequisites: Machine Design, Part I., Mechanics of Materials I.
11. Stereotomy: Intersecting arches, warped surfaces, etc., modeling and drawing. Text: French and Ives' Stereotomy. Prerequisite: Descriptive Geometry.

CIVIL ENGINEERING

1. Plain Surveying: Chain, compass, level and transit use. Text: Pence and Ketchum's Manual of Surveying. Prerequisite: Trigonometry.
2. Field Engineering: Land, topographical, stadia and city surveying. Drawing room—platting, blue printing and tinting. Text: Professor's Notes. Prerequisite: Plane Surveying.
3. Railroad Surveying: Reconnaissance, preliminary and mathematics of curves. Text: Searle's Field Engineering. Prerequisite: Field Engineering.

4. R. R. Economics and Design: Location, maintenance, and economics. Text: Wellington's Economic Theory of Railway Location and Talbot's Transition Curves. Prerequisite: Railroad I.
5. Highway Engineering: Location and construction of streets and pavements. Text: Baker's Roads and Pavements. Prerequisite: Field Engineering.
6. Structural Geology: A study of the earth's crust, dealing with rock form and structure, and the formation of mineral deposits and mountains. Text: Chamberlain and Salisbury. Prerequisites: Physical Geography, Chemistry and Physics.
7. Sewerage: Disposal and design. Text: Fowell's Sewerage. Prerequisites: Chemistry and Surveying.
8. Irrigation: History, methods of installation, cost. Text: Bowie's Irrigation. Prerequisites: Physics and Sewage.
9. Hydraulics I.: Hydrostatic and hydromechanic pressures. Text: Merriman's Hydraulics. Prerequisites: Physics and Calculus.
10. Hydraulics II.: Hydraulic machinery. Text: Merriman. Prerequisite: Hydraulics I.
11. Least Squares: Its relation to Engineering. Text: Merriman's Method of Least Squares. Prerequisites: Calculus, Mechanics.
12. Astronomy: Study of the celestial spheres. Text: Young's Manual of Astronomy. Prerequisite: Calculus.
13. Field Astronomy: Observation and computation. Text: Comstock. Prerequisite: Astronomy.
14. Geodesy: Geodetic surveying and map making. Text: Merriman. Prerequisite: Least Squares.
15. Masonry: Properties and uses of sand, brick, lime and cement. Text: Baker's Masonry Construction. Prerequisites: Stereotomy, Mechanics.
16. Foundation and Retaining Walls: Foundations, dams, retaining walls, culverts, arches. Text: Baker. Prerequisite: Masonry.
17. Mechanics of Materials I. and II.: The course in Mechanics of Materials takes up work in elastic and ultimate strength of materials and treats of the simple stresses which may come upon materials. This is followed by elastic and ultimate deformations. This carries the student into a further discussion of the resistance and elasticity of materials, the theory of beams, continuous girders, columns and shafts. The course also includes a discussion of the resilience, combined and true stresses, and elements of the mathematical theory of elasticity. Text: Merriman's Mechanics of Materials. Prerequisites: Higher Mathematics.
18. Stresses I. and II.: Roofs and bridges. Text: Merriman's Bridge I. Prerequisites: Higher Mathematics and Mech., of Mat.
19. Graphics I. and II.: Roofs and bridges. Text: Merriman's Bridge II. Prerequisite: Higher Mathematics.
20. Higher Structures: Cantilevers, swing bridges, arches, suspension bridges. Text: Merriman's Bridge IV. Prerequisite: Stresses and Graphics.
21. Bridge Design I.: Roofs, trusses and plate girder bridges. Text: Merriman's Bridge III. Prerequisites: Stresses and Graphics.
22. Bridge Design II.: Complete design of simple trusses and special bridges. Text: Professor's Notes. Prerequisites: Bridge Design I.
23. Building Construction: Computation of Stresses and design of modern structures. Text: Ketchum's Mill Buildings. Prerequisites: Stresses and Graphics.
24. Reinforced Concrete: Bridge, buildings, and kindred structures. Text: Taylor and Thompson. Prerequisites: Calculus, Masonry.
25. Cement Laboratory Test for fineness, specific gravity, time of set, tensile and compressive strength, etcetera. Text: Waterbury. Prerequisites: Masonry.

ELECTRICAL ENGINEERING

1. Elementary Electrical Engineering: Lectures, Problems, and Laboratory work in electrical measurements. Prerequisite: Physics VI.
2. Electric Machinery I. (D. C. Generators): Physical theory, construction, reactions, windings. Text: Sheldon's Dynamo Machinery, Vol. I. Prerequisites: Elements, Calculus I. Physics VI.
3. Electric Machinery II: (D. C. Motors, Regulators, Balances): Theory and Construction. Text: Sheldon's Dynamo Machinery, Vol. I. Prerequisite: Electric Machinery I.
4. Electric Machinery III: (D. C. Laboratory): Experimental work with direct currents and D. C. apparatus. Prerequisite: Electric Machinery I. and II. Text: Caldwell's Exper. Elec. Eng.
5. Electric Machinery IV: (D. C. Machine Design): Practical design of a D. C. generator. Text: Gray's Electrical Machine Design. Prerequisite: Electric Machinery II.
6. Electric Machinery V: (A. C. Generators): Theory, construction, windings. Text: Sheldon's Dynamo Machinery. Vol. II. Prerequisite: Electric Machinery II.
7. Electric Machinery VI. (Transformers): Theory, construction, design. Texts: Sheldon's Dynamo Machinery, Vol. II., Taylor's Alternating Current Transformers. Prerequisite: Electric Machinery V.
8. Electric Machinery VII: (A. C. Motors, Synchronous and Induction): Theory, construction, diagrams, design. Text: Bailey's Induction Motors, Sheldon's Dynamo Machinery, Vol. II. Prerequisite: Electric Machinery VI.
9. Electric Machinery VIII: (A. C. Design): Design of an A. C. Generator. Text: Gray's Electrical Machine Design. Prerequisite: Electric Machinery V.
10. Electric Machinery IX: (A. C. Laboratory): Prerequisite: Electric Machinery VII. Text: Caldwell's Exper. Elec. Eng.
11. Alternating Currents: Advanced Theory, lectures, recitations and laboratory. Text: Bedell and Crehore. Prerequisite: Electric Machinery V.
12. Electric Railways: Probable earnings, surveys, construction, operating expenses, car barns. Texts: Harding's Electrical Railway Practice, Gotschall's Electric Railway Economics, Current Periodicals. Prerequisite: For E. E. students, E. E. Mach. VII.
13. Electrical Transmission of Energy: Circuits, losses, tests circuit design. Text: Abbott's Electrical Transmission of Energy. Prerequisite: For E. E. students, E. E. Machine VII.
14. Electric Meters (D. C. and A. C. Meters): Theory, construction, calibration. Prerequisite: Electric Machinery V. Text: Edgecumbe's.
15. Storage Batteries: Theory, construction. Prerequisites: Chemistry II., Electric Machinery I. Text: Lyndon's Storage Batteries.
16. Telephone Engineering: Circuits, apparatus, central office equipment, cable plant. Testing. Prerequisite: Electrical Machine I. Text: Telephony.
17. Illuminating Engineering: Theory and general principles, Photometry, calculation of Illumination. Text: Wicenden's Illumination and Photometry. Prerequisites: Physics V., VI.
18. Electric Power Plant Engineering: Power Plant layouts, switch gear operation of plants. Text: Weingreen. Prerequisite: Physics VI.

MECHANICAL ENGINEERING

1. Thermodynamics. Theory of heat, laws of dynamics, perfect gases saturated vapors, superheated vapors. Text: Cardullo's Thermodynamics. Prerequisites: Calculus II., First Year Physics.
2. Thermodynamics II: Steam engines, compound engines, engines testing, engine economy. Text: Cardullo's. Prerequisite: Thermodynamics.

3. **Steam Engine Design:** Complete design of a steam engine. Text: Professor's Notes. Prerequisites: Machine Design II., Theory of Steam Engine.
4. **Steam Boilers and Boiler Design:** Structure, design, fuels, heating surface, boiler trials. Text: Thurston's Manual of the Steam Boiler. Prerequisites: Thermodynamics, Machine Design II.
5. **Steam Power Plants:** Plant layouts, plant testing, economy, design. Text: Myer's Steam Power Plants. Prerequisites: Theory of Steam Engine, Steam Boilers.
6. **Steam Turbines:** Velocity and flow of steam, flow of steam through orifices, turbines, reaction turbines, impulse-reaction turbines. Text: Moyer's Steam Turbines. Prerequisite: Thermodynamics.
7. **Gas Engines:** Liberation of heat energy, combustion, gas engines burning gas, gas engines using kerosene oil, gas engines using gasoline, automobile engines, ignition, carburation testing. Text: Jones' The Gas Engine. Prerequisite: Thermodynamics.
8. **Mechanical Lab. I:** Laboratory work in heat measurements, Boiler Tests. Text: Moyer's Power Plant Testing. Prerequisite: Thermodynamics.
9. **Mechanical Lab. II:** Steam and Gas Engine Tests, Power Plant Test, Problems. Text: Moyer's Power Plant Testing. Prerequisite: Gas Engines.
10. **Gas Engine Design:** Calculations and assembly drawing. Text: Lucke. Prerequisite: Gas Engines.
11. **Scientific Management:** Factory organization, management, etc.
12. **Machine Theory:** To become familiar with machines. Text: Halsay's Machine Theory.
13. **Machine Shop Practice:** Text: American Machinist's Handbook and Notes.

Theses

Every candidate for a degree must prepare a thesis upon some technical or scientific study, which lies within the field of the degree sought, and may be either designing, construction, testing or research; the study to be selected by the professor in charge and the subject to be announced not less than twenty-four weeks preceding graduation.

The form of the finished thesis must be in accordance with the requirements of the department and the library and be deposited with the Dean at least four weeks before the conferring of the degree.

Degrees

The University is empowered to grant the customary scholastic degrees, but aims to bestow them on the deserving only.

The management accepts grades of equal value from other institutions of learning, yet the applicant for a degree is required to do a reasonable portion of his work here. No diploma is granted on grades made wholly in other institutions. No student carrying more than two subjects will be excused from the final examinations during the senior quarter.

Seminar

Weekly conferences are held for the purpose of discussing current engineering events and topics.

Student Technical Organizations

The Ohio Northern Society of Engineers assembles weekly, to read papers and discuss subjects of interest to all engineering students. During the year a number of practicing engineers are invited to address the society on timely and practical topics. All engineering students are eligible to membership.

The Ohio Northern University Branch of the American Institute of Electrical Engineers holds monthly meetings at which original papers and papers printed in the Proceedings of the American Institute of Electrical Engineers are read and discussed. All students interested in electrical engineering are eligible to membership in this Society.

Expenses

On account of the large number of students in attendance at the Ohio Northern University, the cost of living has been reduced to a minimum. Tuition for a quarter of twelve weeks, \$16.00, which must be paid by Friday of the first week, otherwise an additional dollar is charged. Good board in private families can be obtained at prices ranging from \$1.70 to \$2.75 per week, and a well furnished room at from .60 to \$1.25 per week. Ada is a school town and the majority of the families are engaged in boarding and rooming students. The competition is sharp; hence prices are low and board is good.

A graduation fee of \$5.00 is charged to cover cost of diploma. If real parchment is desired the cost is \$1.00 extra.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rates of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

COLLEGE OF LAW FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Executive Secretary.

JAY PAUL TAGGART, LL. B.,
Dean.

Real Property, Equity, Constitutional Law, Etc.

WILLIAM WESLEY RUNSER, LL. B.,
Contracts, Torts, Negotiable paper, Etc.

CHILDE HAROLD FREEMAN, B. S.,
Rhetoric.

CHARLES ANDREW FRITZ, A. M.,
Oratory and Public Speaking.

ALFA HOLMES,
Registrar.

Its Object

The College of Law was established as a Department of the University in the year 1885.

The aim of its founders was to afford an opportunity for young men of the country, of limited means, to secure the benefit of collegiate training in pursuing this line of study. It was made a department of the Ohio Northern University that law students might have all the advantages of low rates for boarding, rooming and other general expenses, afforded by the University.

The courses are planned primarily to train students for the practice of law, but they may profitably be taken by anyone desiring to secure a knowledge of the principles and history of the law, without a view to practicing, and special attention will be given to the accommodation of such students.

In the training of students for the practice of law, it aims:

(a) To give a thorough, systematic grounding in the history and fundamental principles of the law.

(b) To give special instruction preparatory to examinations for admission to the bar.

(c) To impart a working knowledge of statute law and court practice and procedure, and to inculcate the principles of legal ethics, to the end that the young lawyer may intelligently and honestly serve his clients and the public.

Admission

Students may enter the College of Law at any time, but preferably at the beginning of a school quarter. Any one holding a diploma from a reputable college, academy or high school is admitted without examination; all others are required to furnish satisfactory evidence of a sufficient knowledge of the common branches to begin the study of law and to pursue it profitably. Examinations for this purpose are held, when deemed necessary, by the Law Faculty.

Credit is given for the study in the office of a practicing attorney, when duly certified, and special advantages are offered to students who have done such work and desire to complete their study and prepare for the bar examinations here. It is urged, however, that whenever possible students take the complete curriculum of study in the College of Law, as the systematic study of the whole body of the law thus obtained is invaluable.

Preliminary to Bar Examination

The preliminary literary work required for admission to the Bar examination may be taken in the University under the regular law tuition, and a certificate showing the completion of either of the courses in the Preparatory School admits the student to the Bar examination in this state, without a preliminary examination.

Curriculum

First Year

FALL QUARTER

Elementary Law

Personal Property
Contracts I.
Sales

WINTER QUARTER

Domestic Relations and Criminal Law
Law of Persons

Agency
Contracts II.
Torts I.

SPRING QUARTER

Bailments
Partnership
Torts II.

Second Year

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
Insurance	Wills	Administration of Estates
Negotiable Paper I.	Negotiable Paper II.	Municipal Corporations
Suretyship	Real Property I.	Real Property II.
Private Corporations I.	Private Corporations II.	Pleading and Practice I.

Third Year

FALL QUARTER	WINTER QUARTER	SPRING QUARTER
Pleading and Practice II.	Evidences I.	Evidences II.
Constitutional Law	Equity I.	Equity
Quiz A	Quiz A	Quiz A
Quiz B	Quiz B	Quiz B

Lectures are given on legal ethics, legal history, international law and court practice.

Lectures on special subjects, both by members of the faculty and by other competent lecturers, will be given from time to time, as they can be arranged. During the year the student is required to familiarize himself with the principles involved in leading cases on the various subjects, these cases being carefully selected by the instructor.

Special Term

On the Tuesday following the close of the spring quarter, a special term begins and continues for twelve weeks. A student pursuing the regular course may make up during this special term any work which he has not completed in the regular year's work, or this term may be substituted for one of the other quarters in the year's work when it is convenient for the student to make the substitution.

The "Quiz"

Special emphasis will be continued to be laid upon the quiz work, under the personal instruction of the Dean, preparatory to bar examination. This quiz work has been a marked feature of the past success of the College of Law, and includes a thorough review of the principal subjects of the law and of the most important statute and case law of the jurisdiction.

WILLIAM HENRY TRAINUM, A. M., B. D.,
Psychology, Ethics and Philosophy.

STURGISS BROWN DAVIS, A. B., A. M.,
Dean of College of Education.
Pedagogics and Methodology.

CARRIE ADEL WILSON, B. E.
Training Teacher.

LEAH ASCHAM, A. B.,
Algebra, Geometry.

JOHN LEVI MANAHAN, B. S., B. PED.,
Supervisor of Model School.
[Summer Term]

PAULINE BURKLEY,
Critic Teacher, Intermediate.
[Summer Term]

NELLIE ADELINE HOLT,
Critic Teacher, Primary.
[Summer Term]

THOMAS JEFFERSON SMULL, C. E.,
Dean of College of Engineering.
Civil and Architectural Engineering.

MRS. EVA MAGLOTT, A. M., C. E.,
Mathematics.

ERNEST BERT THURSTON, E. E., M. E.,
Mechanical Engineering.

CHARLES ADDISON MILLER, C. E.,
Mining and Municipal Engineering.

KARL BOYER MCEACHRON, E. E., M. E.,
Electrical Engineering.

STRAWDER ARTHUR RINGER, B. C. S.,
Principal of Commercial Department.
Bookkeeping, Banking, Higher Accounting.

EMMET ELIJAH LONG, B. C. S.,
Commercial Arithmetic, Penmanship.

Moot Courts

For the purpose of putting into practice what is acquired, Moot Courts are held each Friday afternoon, in which the student has actual practice of the various courts. He is required to get out all the papers necessary for the case, and to follow strictly every order of procedure. Pleadings, writs, motions and journal entries, together with the principles of proceeding in appeal and error, form a part of the work of the student in these courts, and every detail is looked after by the judge who sits in the case. Juries are chosen, witnesses are examined, motions are made and heard, and everything is made to conform as nearly as possible to the practice of the regular courts. The practice acquired during the course is much greater and more advantageous to the student than the actual work of the first few years of practice. Here his work is looked after and corrected, and he has the advantage of knowing when the work is properly done without the responsibility that attaches to it in the court room.

Recitations

Each student attends from three to four recitations daily, in which he goes over prescribed lessons. These recitations are conducted principally on the quiz method, the best for individual instruction and help, but the lecture and case methods of giving instruction are combined with the quiz method in the class-room work.

Library Facilities

There is a good working library connected with the College of Law, to which large additions have recently been made. All law students have access to this library from 8:00 o'clock A. M. until 5 o'clock P. M., except during the noon hour. Students are not allowed to take any books from the library, however, except on a written order from the Dean.

Books Rented

Arrangements have been made with one of the regular book-sellers by which the student may rent most of the text books used in the course at reasonable rates. Those not desiring to rent may purchase books at wholesale rates.

Degrees

The degree of Bachelor of Laws is conferred on students who have completed the prescribed course of study and possess the preliminary qualifications necessary to admit them to the Bar examination of this state, and have complied with the following requirements:

1. Regular attendance for three years in the Law College of the Ohio Northern University.
2. Regular attendance for two years provided the student brings credits for one year's study of law, either in a college or law school or in an office of an attorney, the work being properly certified.
3. Regular attendance for one year, provided the student brings credits for two years' study of law in a college or law school, or in an office of an attorney, the work being properly certified.

Students who have not completed the full year's work in an office or at a law college, may complete this work during special quarters by having the work which has been completed in the office or law college properly certified.

Advantages of Ohio Northern College of Law

1. Because it offers thorough, systematic legal training at low cost in a most congenial environment.
2. Because it is a part of a great university with all the advantages of university life, literary societies, debating clubs, and other student activities, without extra expense.
3. Because the student may, without extra expense, while pursuing his law course take literary work necessary to complete his general educational qualification for admission to the bar.
4. Because the student may enter at any time and find classes suited to his degree of advancement.
5. Because special facilities are afforded those who desire to complete a legal education begun in an attorney's office.

6. Because special stress is laid upon and special facilities afforded for the preparation of students for bar admission examinations.
7. Because every effort is made to prepare the student for the actual practice of law by means of moot courts, instruction in pleading and procedure and in statutory law.

EXPENSES

Tuition

The tuition for the College of Law is \$16 for a quarter of 12 weeks, \$31 for two quarters, \$46 for three quarters, \$61 for four quarters, if paid in advance.

Tuition must be paid by Friday of the first week, otherwise an additional dollar will be charged.

Graduation Fees

Neatly executed diplomas are awarded to those who complete the course of study. The diploma fee is \$6.00. Candidates for any degree are required to pay full tuition in graduation quarter.

Room and Board

Good board in private families, \$1.70 to \$2.75 a week.

Furnished room, two in a room, per week, 60 cents to \$1.25 each.

Refunding

Tuition is refunded only in case of protracted sickness. No tuition will be refunded for the first half of the quarter. If in school longer than a half quarter, the student will be charged at the weekly rate of the department in which he is enrolled. Fractional weeks are counted as full weeks. Receipts are not transferable.

COLLEGE OF COMMERCE

FACULTY

ALBERT EDWIN SMITH, D. D., PH. D.,
President.

CHARLES BYRON WRIGHT, G. S.,
Dean.

STRAWDER ARTHUR RINGER, B. C. S.,
Bookkeeping, Banking, Higher Accounting, Salesmanship,
History of Commerce, Commercial Geography.

EMMET ELIJAH LONG, B. C. S.,
Penmanship, Commercial Arithmetic, Spelling,
Rapid Calculation, Freehand Drawing.

GEORGE WILLIAM SCHEID, B. STEN.,
Stenography, Typewriting, Business English.

EMILY LOUVILA ROE, B. C. S.,
Assistant in Bookkeeping and Auditing.

WILLIAM W. RUNSER, LL. B.,
Commercial Law, Contracts, Negotiable Paper.

WILLIAM A. TRAINUM, A. M., B. D.,
Economics.

RUDOLPH H. RAABE, PH. G.,
Advanced Arithmetic.

RICHARD H. SCHOONOVER, A. M.,
Grammar, Orthography.

CHILDE HAROLD FREEMAN, B. S.,
English.

CHARLES A. FRITZ, A. M.,
Rhetoric.

ALFA HOLMES,
Registrar.

FLO L. CRONBAUGH, B. STEN.,
Stenographer.

Aim

The College of Commerce was established shortly after the founding of the University in 1866. While one of the oldest departments in the University, it is one of the newest, keeping pace with modern conditions as it continues to fulfill its important mission of preparing students to "do things" in the world of commerce. It seeks to cultivate in them a healthy respect for business in all its branches because of the marked and manifold part it plays in modern civilization, to arouse an interest in the higher welfare of society and to awaken an ambition to become intelligent, open-eyed, public-spirited and successful men of affairs.

Equipment

The present equipment, quite adequate and complete, will be largely renewed and modernized in a few weeks, when the College of Commerce moves into new and permanent quarters nearly ready for occupancy.

Individual bookkeeping desks, writing tables, up-to-date office equipment for class use, new Remington and Monarch typewriters, Burroughs adding machine, modern books of accounting, filing cabinets, guides, bulletins, and other modern furnishings will be found in the new home, which covers the entire third floor of the Lehr Memorial building. The quarters are roomy, with an abundance of light, heat, ventilation and toilet conveniences. It is the purpose of the management to supply all necessary means and appliances to make the instruction as efficient as possible.

The Courses of Study

The courses of study are thorough, practical and comprehensive, including all the branches that are necessary to qualify young men and women for successful business, stenographic and teaching careers, as well as to supply foundation material for lives of usefulness and executive leadership. These courses are the result of constant revision and improvement for a half-century.

Time Required

It requires about three quarters to complete either of the short courses in Business and Stenography, the length of time depending on previous educational preparation, application, aptness and so on.

The long courses in Business and Stenography require about four quarters after graduation from a first class (four year) high school course, or the completion of preparatory work equivalent thereto. All or a part of the preparatory work may be taken in the Preparatory School of the University, at the same rates of tuition.

Promotions

Students are promoted as rapidly as they advance in their work, but no student is permitted to enter a next higher class until he has completed and made correct all work prerequisite to and preceding the more advanced subjects. No student is held back in his bookkeeping work if he be able to progress more rapidly than the others of his class, yet all class recitations must be regularly attended.

Degrees

Those who complete the Short Business Course receive a certificate with the rank, "Graduate in Commercial Science;" those completing the Long Course in Business have conferred upon them the degree of "Bachelor of Commercial Science;" those completing the Short Stenography Course are ranked as "Graduates in Stenography," while those completing the Long Stenography Course win the degree of "Bachelor of Stenography."

Diplomas

Neatly executed diplomas are awarded to those completing any regular course of study. The fee for this is \$2.00. Those desiring parchment will pay an additional one dollar.

When to Enter

The instruction is imparted by the class method, but after the first term a great part of it is individual. Nearly every subject is offered from two to four times a year. All courses in Bookkeeping and Stenography are offered four times a year. In view of these facts, students are admitted at any time, but to obtain the best results, they are urged to enter, if possible, at the beginning of a quarter. For opening dates see Calendar on the second page of the catalogue.

Positions for Students

Positions are not guaranteed, but great pleasure is taken in assisting worthy graduates, through the Employment Department, to secure situations. The efficient student who is qualified need have no worry about obtaining a position; the only cause for anxiety should be how to hold a position.

The O. N. U. Commercial Club

Within the department, maintained by the students themselves with the faculty as an advisory committee, is a live commercial club. It convenes as often as it desires and discusses all phases of commercial work from that of class work to the most technical and general commercial topics of the day. Frequent addresses are given by bankers, business men, professors and by the students themselves. A large membership is constantly enrolled. In May, 1914, it held its first annual banquet and launched a movement for a still greater function this year.

University Advantages

Besides the advantages of the College of Commerce the University offers to every student additional privileges: Admission to the regular classes in the College of Liberal Arts without extra charge; the opportunity of obtaining military instruction, of participating in literary work in the three literary societies that have made Ohio Northern University famous; and the benefits of college environment and associations, lectures, athletic tournaments, contests, etcetera.

The opportunity to develop the ability to speak in public, so essential to every business man, is alone worth careful consideration. Board and rooms are at a minimum in cost. By paying \$2.00 in addition to the regular tuition, commercial students are admitted to the College of Law.

Inspection Invited

All departments of the College of Commerce are open to inspection at all times and prospective students and others interested in the work are gladly welcomed.

Send Names

If you know of any who may be interested in Commercial education kindly send their names, and a personal letter accompanied with the latest bulletin or catalogue will be mailed to them.

BUSINESS AND BANKING DEPARTMENT

The Department is particularly proud of the strong Business Courses offered, which are practical and comprehensive throughout and are designed for those who desire to begin office work immediately upon completing their courses and for those who expect to enter the field of commercial teaching. A graduate of this department, because of the diversity and scope of his training, is ready to adapt himself to the varied conditions and experiences that confront him in the business world.

Courses of Study

1. Short Business Course

Diploma: Graduate in Commercial Science.

FIRST QUARTER

Advanced Arithmetic
Introductory Bookkeeping
Penmanship
Typewriting and Manifolded
Spelling and Rapid Calculation

SECOND QUARTER

Commercial Law (or Business English)
Commercial Arithmetic
Business English (or Commercial Law)
Penmanship
Practical Bookkeeping (Actual Business)
Typewriting and Mimeographing

THIRD QUARTER

Commercial Law (or Business English)
Business English (or Commercial Law)
Banking and Office Practice
Salesmanship and Advertising

2. Long Business Course

Degree: Bachelor of Commercial Science.

A more extended course is here scheduled for those intending to teach in Commercial Schools or desiring more advanced training.

This course leads to the degree, "Bachelor of Commercial Science," and the candidate must have as a prerequisite a first class (four year) High School education or its equivalent in some recognized preparatory school.

FIRST QUARTER

Economics I.
Introductory Bookkeeping
Penmanship
Typewriting and Manifoldling
Spelling and Rapid Calculation

SECOND QUARTER

Commercial Law (or Business English)
Economics II.
Business English (or Commercial Law)
Penmanship
Practical Bookkeeping (Actual Business) and Adding Machine.
Typewriting and Mimeographing

THIRD QUARTER

Commercial Law (or Business English)
Commercial Arithmetic
Business English (or Commercial Law)
Banking and Office Practice
Salesmanship and Advertising

FOURTH QUARTER

Higher Accounting
Contracts or Negotiable Paper
Lettering
History of Commerce and Commercial Geography

Those desiring may have extensive practice in Auditing by assisting the professor or assistant in charge of the books in the Office Practice and Banking classes.

Students desiring credit for work in bookkeeping done elsewhere must present all their books worked out and properly arranged, or pass a satisfactory examination on that subject.

Students are required to take Advanced Arithmetic or pass an entrance examination therein.

Any class in the department of mathematics of the Ohio Northern University is open to commercial students without extra charge.

Theses

Every student expecting to graduate must prepare a thesis upon some commercial or economic subject lying within the

field of the degree sought; the subject to be selected by the instructor or principal in charge, or by the student himself if the instructor so directs. In the latter case the subject selected must be approved by the instructor.

The preparation of all theses must begin at least one term in advance of graduation and the form of the finished thesis be in accordance with the requirements of the department.

In the "Short Business Course" a minimum of fifteen hundred words is required and in the "Long Business Course" a minimum of twenty-five hundred words. All these must be completed and deposited with the principal at least two weeks before the conferring of the degree or graduate rank.

Description of Courses

Introductory Bookkeeping. A thorough study of the fundamental principles of bookkeeping. When the student has finished this work he is familiar with journalizing, posting, closing ledgers, making trial balances and financial statements, the use of the sales book, invoice book, cash book and various other individual books. He knows about partnership bookkeeping and all its kindred phases, and has a good knowledge of debits and credits. After passing a written examination he is promoted to the actual business and bookkeeping class.

Actual Business. Bookkeeping and business principles taught by actual use.

Each student is given a capital with which he launches into business for himself, claiming his attention and ability and requiring him to bring into practical use all he has previously learned. He becomes familiar with all kinds of negotiable paper; does business with the offices and fellow class mates, using daily market quotations; keeps his money in three banks; discounts notes, leaves drafts for collection, protests notes; balances his books and proves his cash every day. He does business in turn as individual proprietor, with one partner, with two partners, with three partners, and then at the end changes from a partnership business to a corporation and does business as such, declaring dividends, making assessments, et cetera, until all transactions in the College of Commerce Guide are completed and a written test is passed when he is promoted to office practice.